

COMPAL CONFIDENTIAL

MODEL NAME : QALA0
PCB NO : LA-7761P (DAZ0LH00100)
BOM P/N : 4319EI31L01,4319EI31L02,4319EI31L03,4319EI31L04.
GPIO P/N: E4 VC GPIO map rev 1.1

Dalmore 15 UMA
Ivy Bridge + Panther POINT
www.aitech1.ru
2012-02-22
REV : 1.0 (A00)
@ : Nopop Component
CONN@ : Connector Component

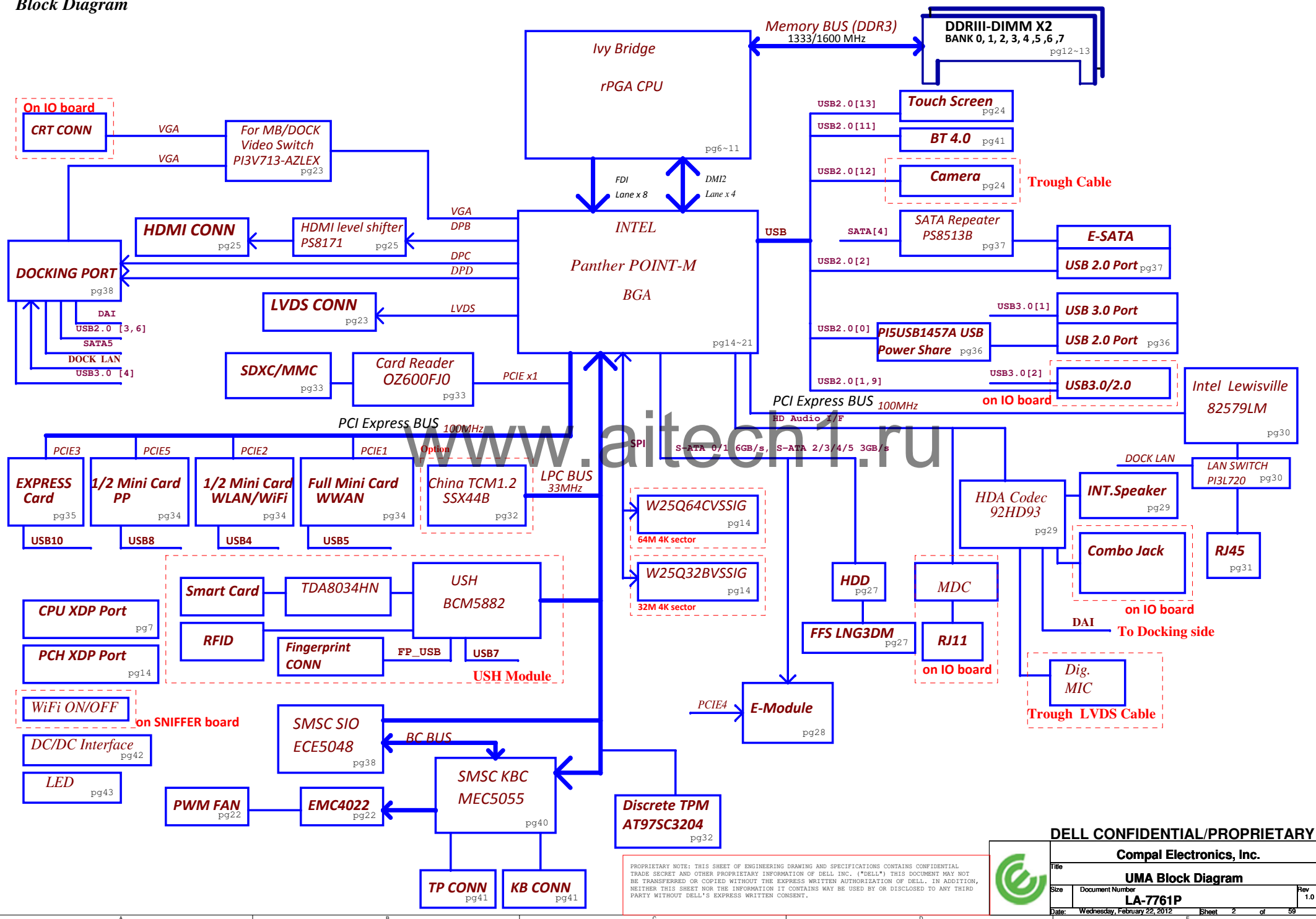
MB Type	BOM P/N	
TPM	4319EI31L01(R3) 4319EI31L03(R1)	1@ 3@
DTP	4319EI31L02(R3) 4319EI31L04(R1)	2@ 3@

MB PCB	
Part Number	Description
DA60000S00	PCB 0LH LA-7761P REV0 M/B UMA

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Compal Electronics, Inc.			
Title Cover Sheet			
Size	Document Number	Rev	
	LA-7761P	1.0	
Date:	Wednesday, February 22, 2012	Sheet	1 of 59

Block Diagram



POWER STATES

Signal State	SLP S3#	SLP S4#	SLP S5#	SLP A#	ALWAYS PLANE	M PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON
S3 (Suspend to RAM) / M3	LOW	HIGH	HIGH	HIGH	ON	ON	ON	OFF	OFF
S4 (Suspend to DISK) / M3	LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF	OFF
S5 (SOFT OFF) / M3	LOW	LOW	LOW	HIGH	ON	ON	OFF	OFF	OFF
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH	LOW	ON	OFF	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH	LOW	ON	OFF	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	OFF

USB 3.0 PORT#	Connetion
1	JUSB1 (Right side)
2	JUSB2 (Left side)
3	NA
4	DOCKING

PM TABLE

power plane State	+PWR_SRC +PWR_SRC_S +5V_ALW +3.3V_ALW +3.3V_ALW_PCH +3.3V_RTC_LDO	+3.3V_SUS +1.5V_MEM	+5V_RUN +3.3V_RUN +1.8V_RUN +1.5V_RUN +0.75V_DDR_VTT +VCC_CORE +1.05V_RUN_VTT +1.05V_RUN	+3.3V_M +1.05V_M	+3.3V_M +1.05V_M (M-OFF)
S0	ON	ON	ON	ON	ON
S3	ON	ON	OFF	ON	OFF
S5 S4/AC	ON	OFF	OFF	ON	OFF
S5 S4/AC don't exist	OFF	OFF	OFF	OFF	OFF

SATA	DESTINATION
SATA 0	HDD
SATA 1	ODD/ E3 Module Bay
SATA 2	NA
SATA 3	NA
SATA 4	ESATA
SATA 5	Dock

PCH	USB PORT#	DESTINATION
	0	JUSB1 (Right side)
	1	JUSB2 (Left side)
	2	JESA1 (Right side ESATA)
	3	DOCKING
	4	WLAN
	5	WWAN
	6	DOCKING
	7	USH->BIO
	8	JMINI3(Flash)
	9	JUSB (Left side)
	10	Express card
	11	Bluetooth
	12	Camera
	13	LCD Touch
USH	0	BIO
	1	NA

PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	Express card
Lane 4	E3 Module Bay (USB3)
Lane 5	1/2vMINI CARD-3 PCIE
Lane 6	MMI
Lane 7	10/100/1G LOM
Lane 8	None

UMA DP/HDMI Port	Connetion
Port B	MB HDMI Conn
Port C	Dock DP port 2
Port D	Dock DP port 1

Please get below information from Layout/Randy for PCB stack up.

Layer No.	Name	Er	Material	Thickness (Material SPEC.) Unit : mil	Thicknes s (Actuality) Unit : mil
			SolderMa sk		0.50
			Add Plating		1.45
1	Top		Copper foil	0.5oz	0.65
			Prepreg	1080	2.60
2	VCC		Copper foil	1oz	1.35
			Core	3mil	3.00
3	Sig 1		Copper foil	1oz	1.35
			Prepreg	7628 HRC*2+2116+7628 HRC*2	33.50
4	Sig 2		Copper foil	1oz	1.35
			Core	3mil	3.00
5	GND		Copper foil	1oz	1.35
			Prepreg	1080	2.60
6	Bottom		Copper foil	0.5oz	0.65
			Add Plating		1.45
			SolderMa sk		0.50
Overall Thickness (1.4mm ± 10%)				55.1	55.30000
					1.40462

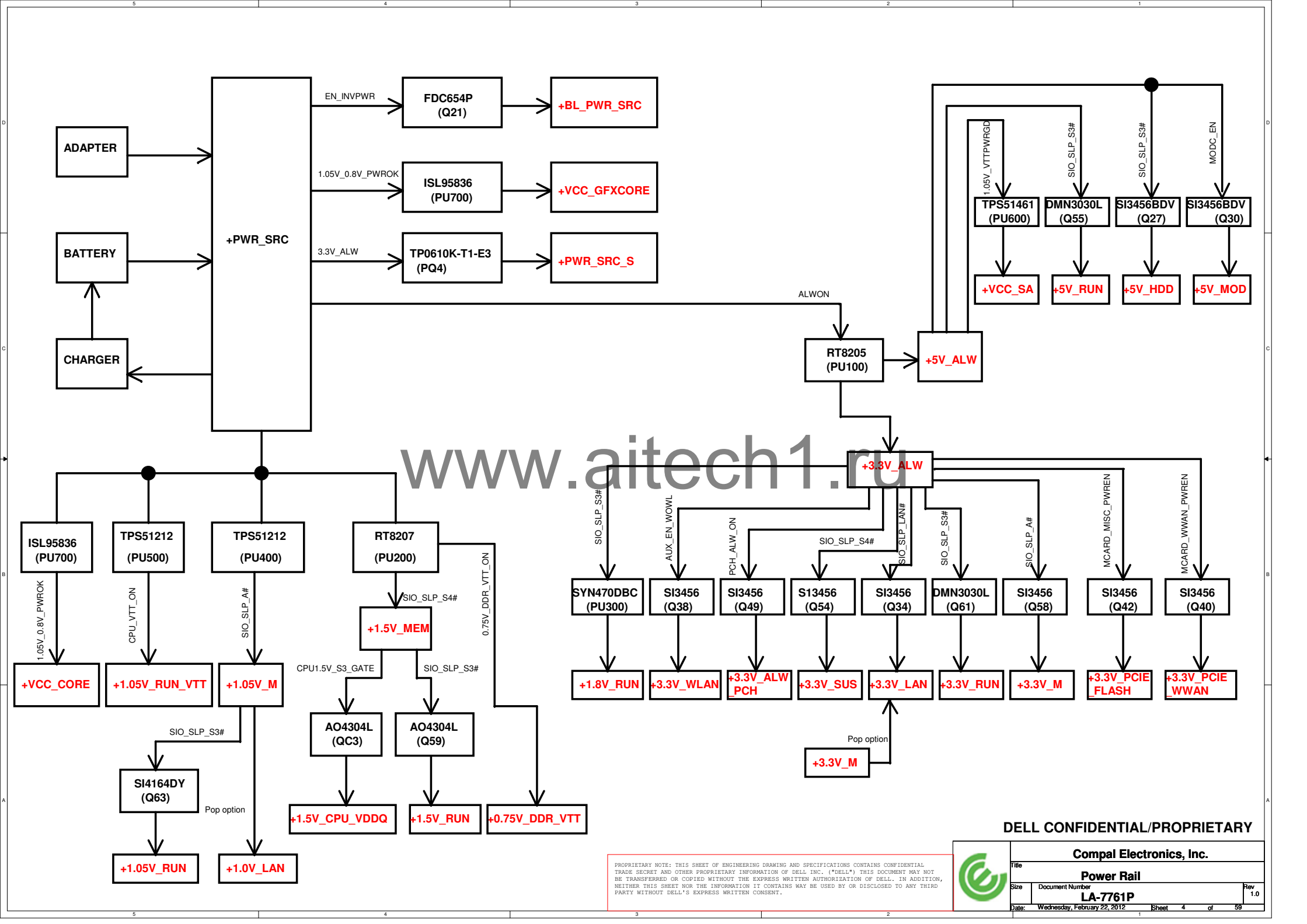
need to update Power Status and PM Table

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Index and Config.			
Title	Document Number	Rev	1.0
LA-7761P		Date:	Wednesday, February 22, 2012
		Sheet	3 of 59

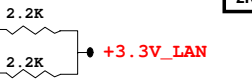
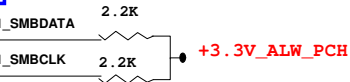
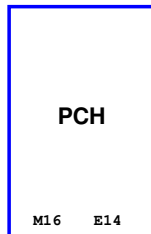


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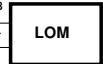
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Power Rail	
LA-7761P	Rev 1.0
Date: Wednesday, February 22, 2012	Sheet 4 of 59

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SMBUS Address [0x9a]



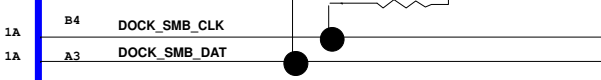
2N7002
2N7002



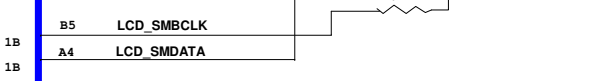
A5 E14



127
129



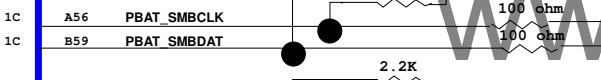
100 ohm
100 ohm



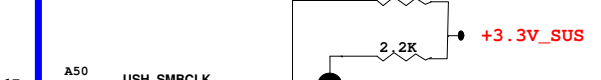
M9
L9



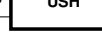
7
8



10
9



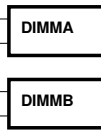
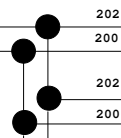
29
30



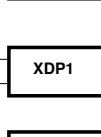
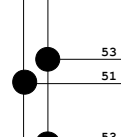
2
3



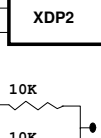
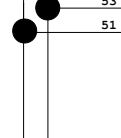
SMBUS Address
APR_EC: 0x48
SPR_EC: 0x70
MSLICE_EC: 0x72
USB: 0x59
AUDIO: 0x34
SLICE_BATTERY: 0x17
SLICE_CHARGER: 0x13



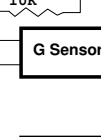
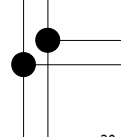
SMBUS Address [A0]



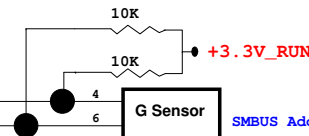
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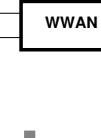
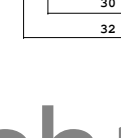
SMBUS Address [TBD]



SMBUS Address [TBD]



SMBUS Address [3B]



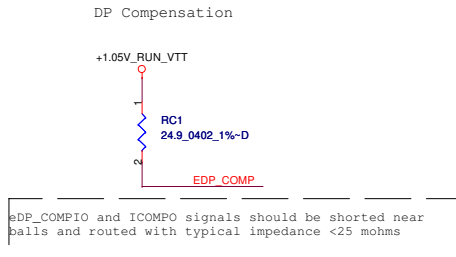
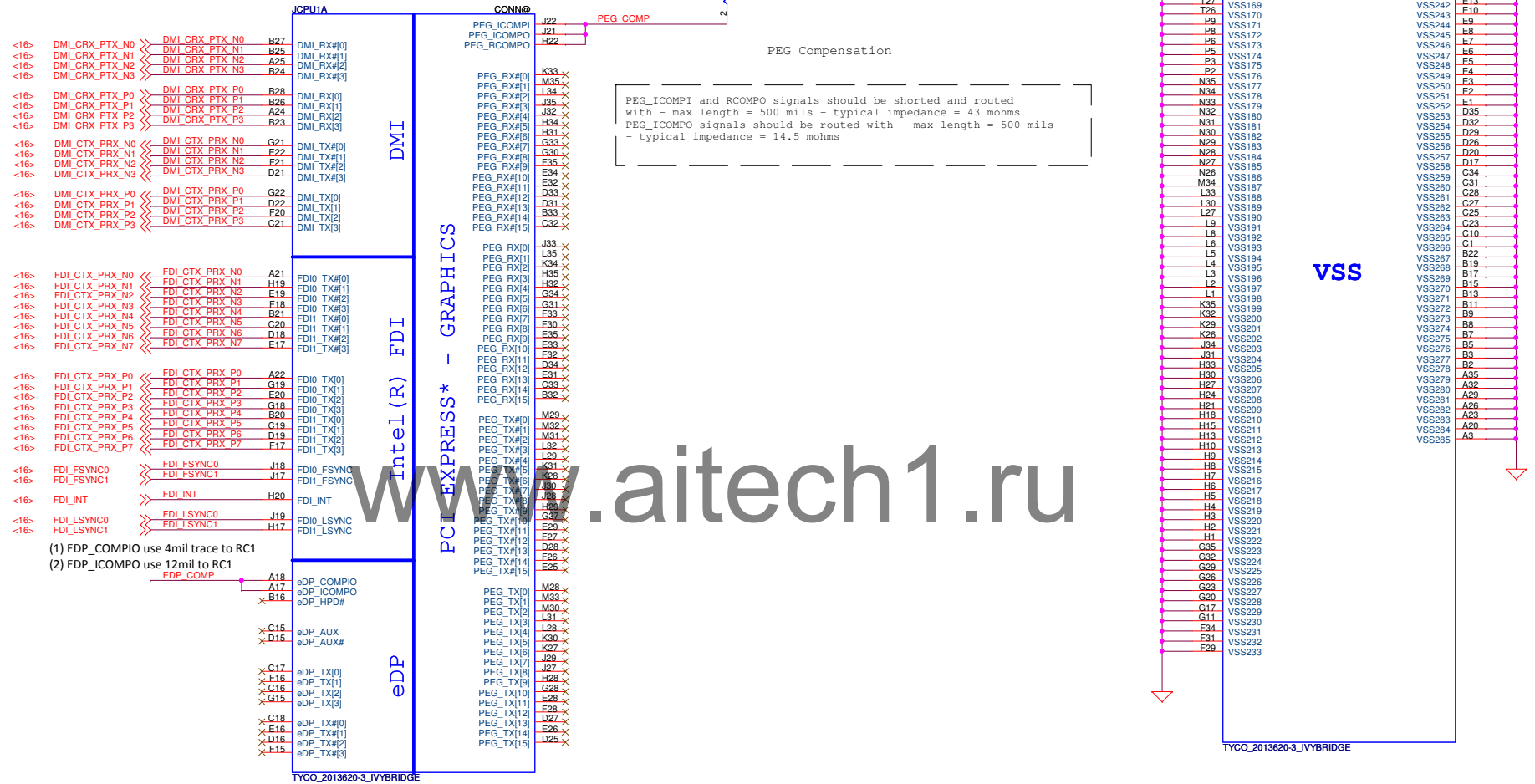
SMBUS Address [TBD]

KBC

MEC 5055

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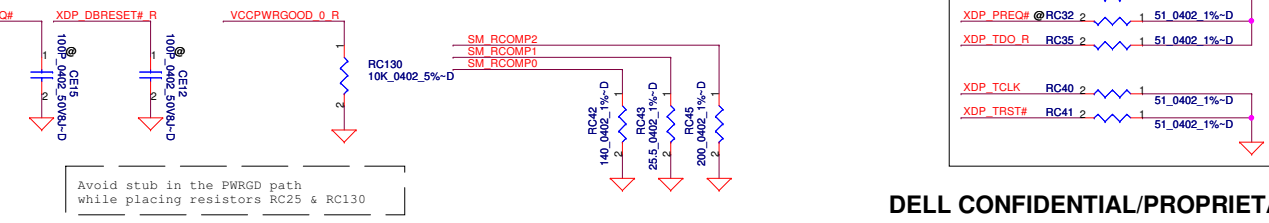
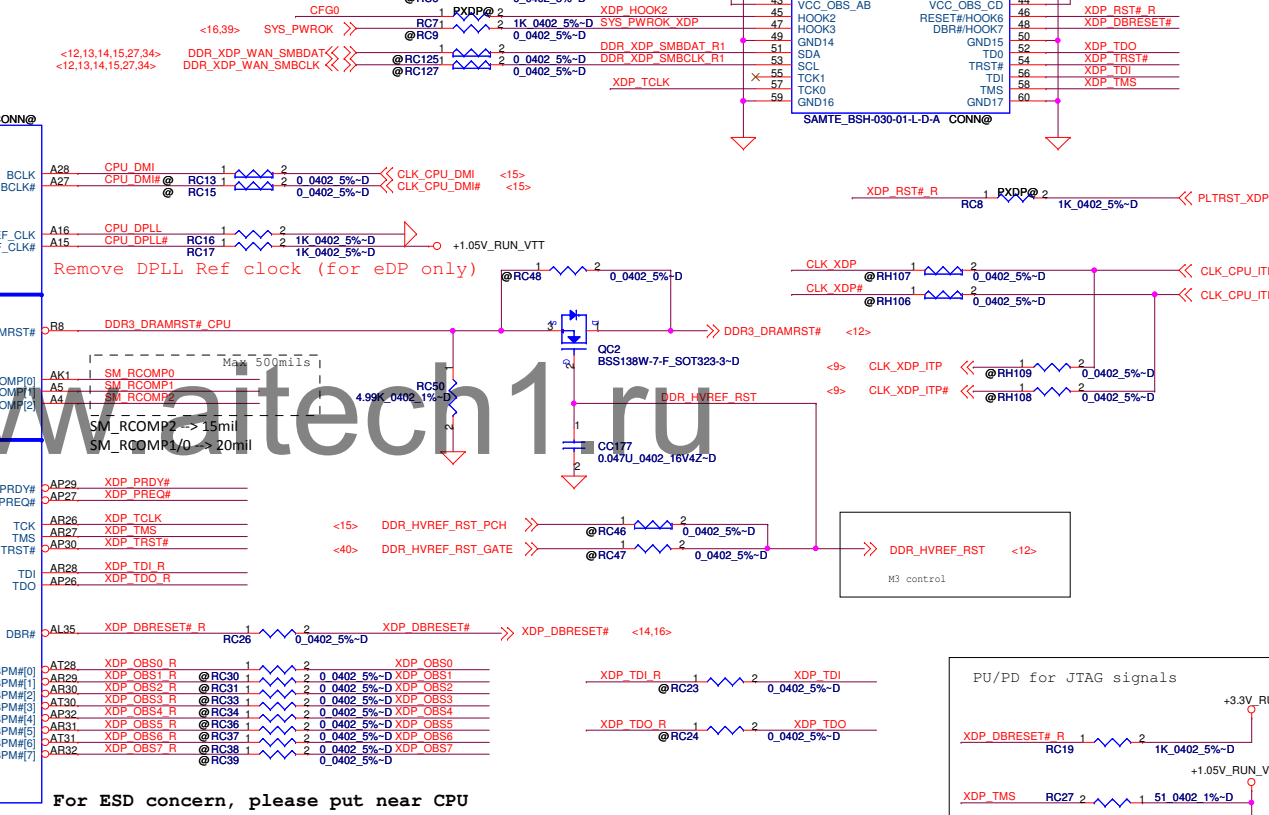
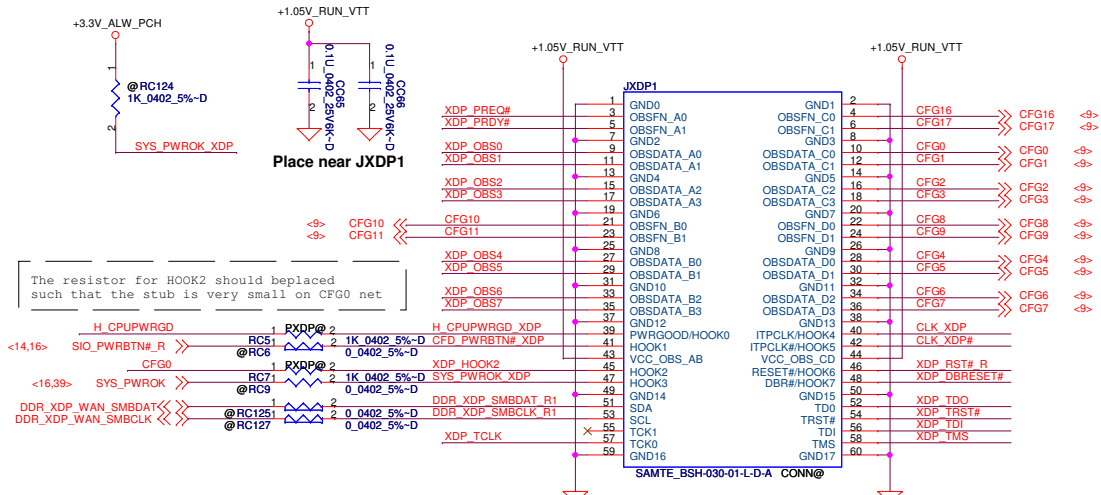
- (1) PEG_RCOMP (H22) use 4mil connect to PEG_ICOMPI, then use 4mil connect to RC2.
(2) PEG_ICOMPO use 12mil connect to RC2

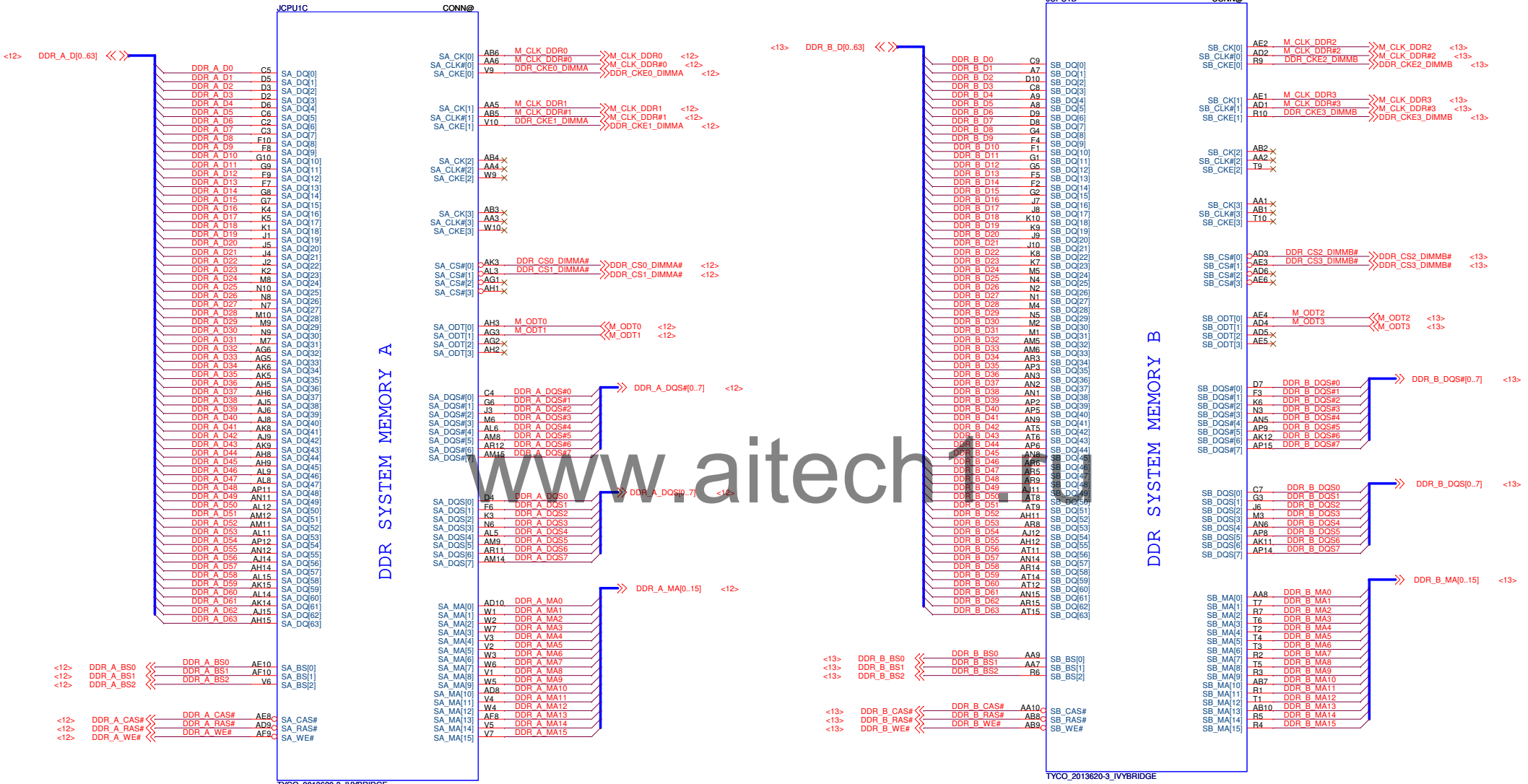


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Sandy Bridge (1/6)	
LA-7761P	
Date: Wednesday, February 22, 2012	Sheet 6 of 59

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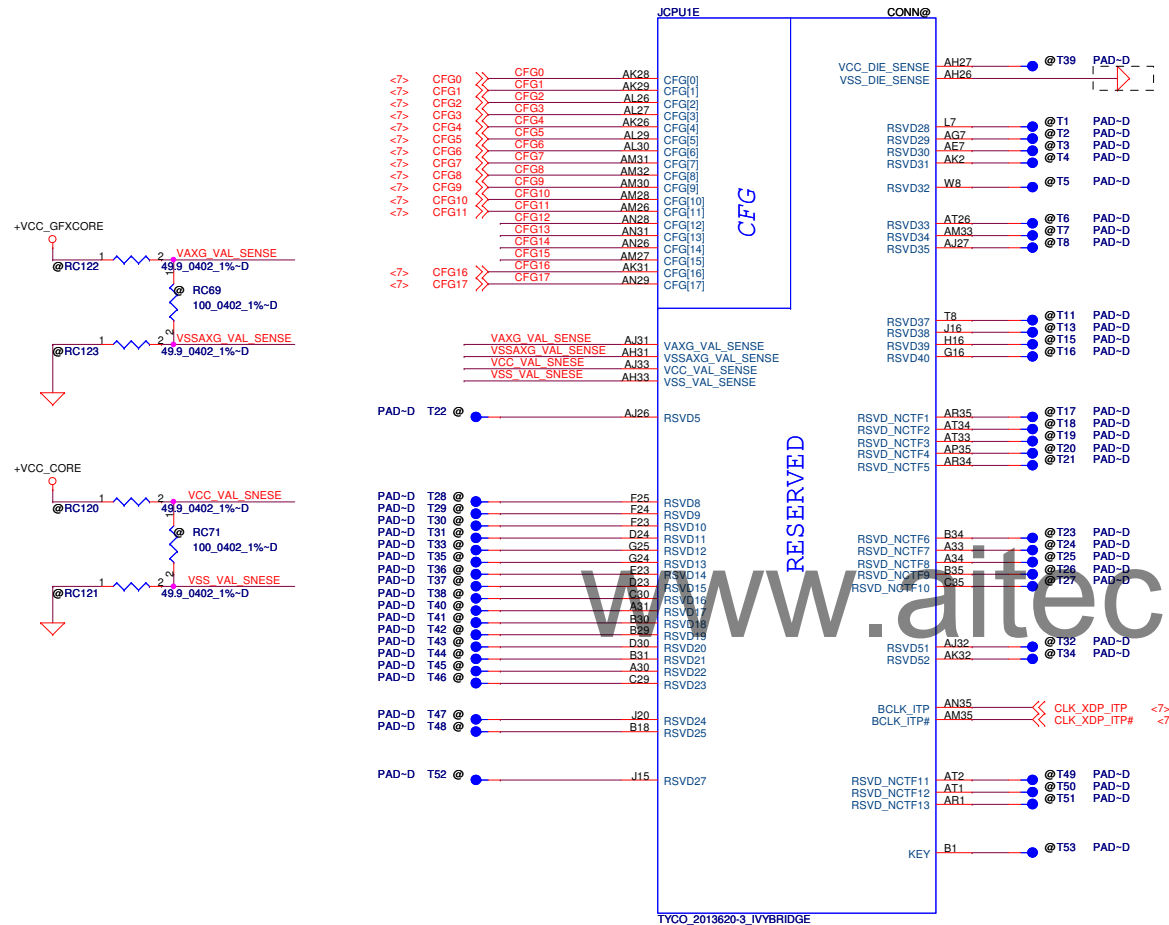


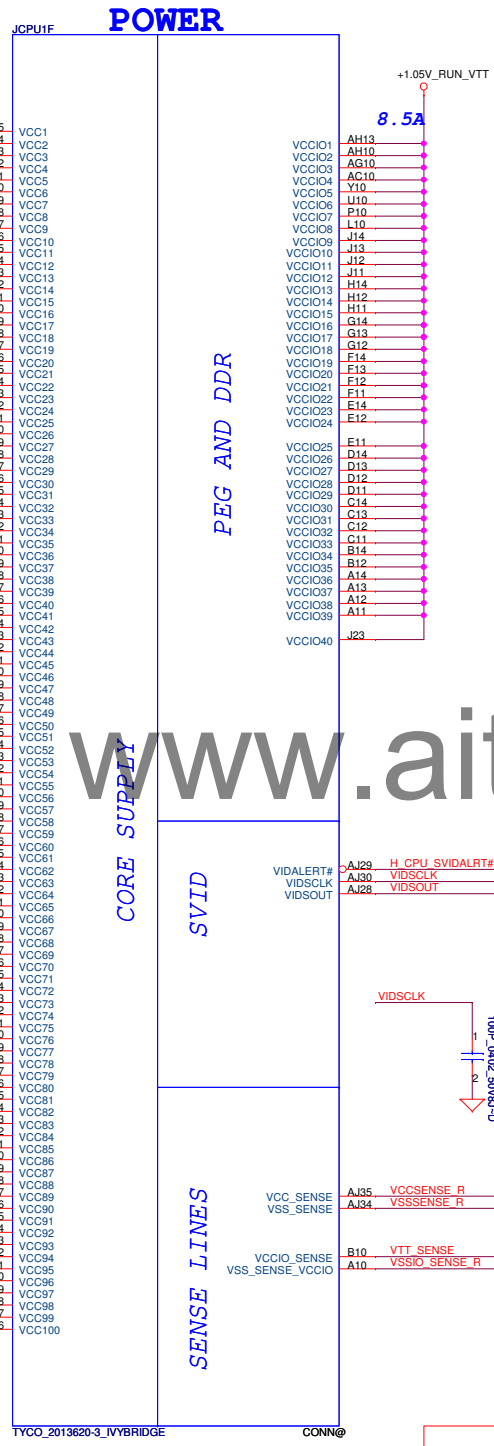


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CFG Straps for Processor





Note: Place the PU resistors close to CPU
RC61 close to CPU 300 - 1500mils

CAD Note: Place the PU
resistors close to CPU
RC63 close to CPU 300 - 1500mils

H_CPU_SVIDALRT# must be routed between the
VIDSOUT and VIDSCLK lines to reduce cross
talk. 18 mils spacing to others.

Place RC66, RC70 near CPU

Iccmax current changed for PDDG Rev0.7

CPU Power Rail Table		
Voltage Rail	Voltage	S0 Iccmax Current (A)
VCC	0.65-1.3	53
VCCIO	1.05	8.5
VAXG	0.0-1.1	26
VCCPLL	1.8	3
VDDQ	1.5	5
VCCSA	0.65-0.9	6
+1.5V_MEM	1.5	12-16 *
* Description		
5A to Mem controller(+1.5V_CPU_VDDQ)		
5-6A to 2 DIMMs/channel		
2-5A to +1.5V_RUN & +0.75V_DDR_VTT		

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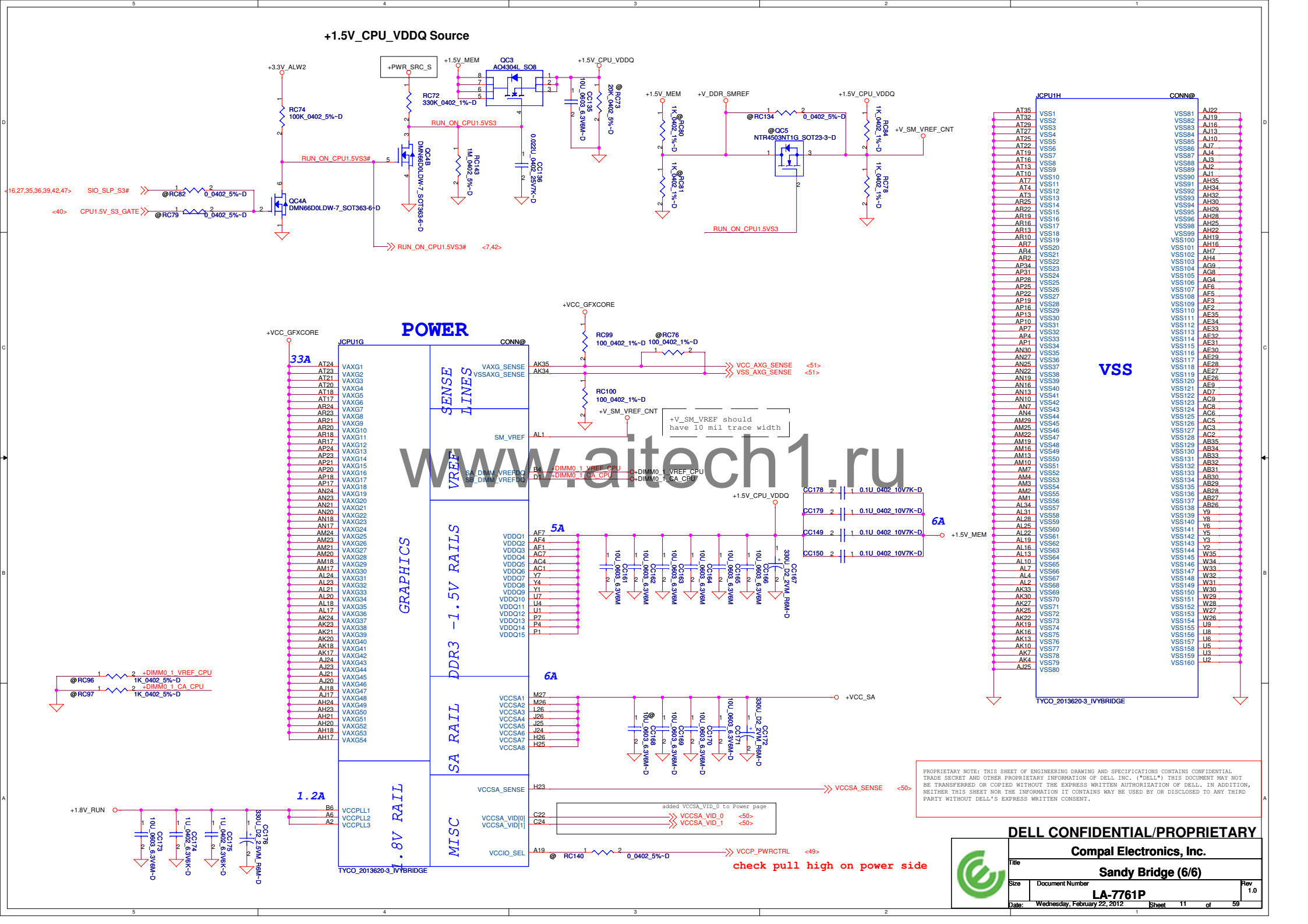
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Title Sandy Bridge (5/6)

Size Document Number LA-7761P Rev 1.0

Date: Wednesday, February 22, 2012 Sheet 10 of 59



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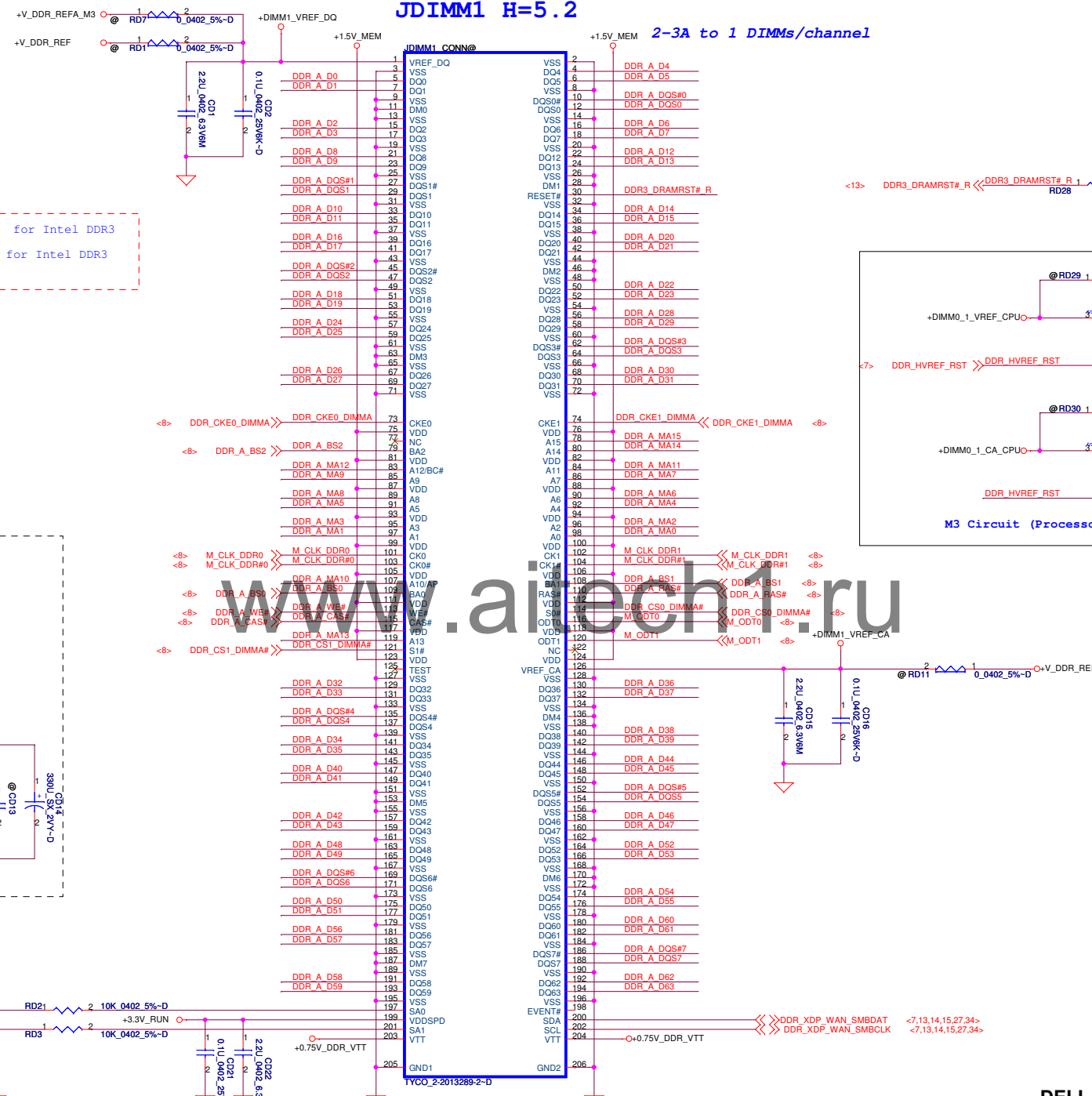
Sandy Bridge (6/6)

LA-7761P

Date: Wednesday, February 22, 2012 Sheet 11 of 59

JDIMM1 H=5.2

2-3A to 1 DIMMs/channel

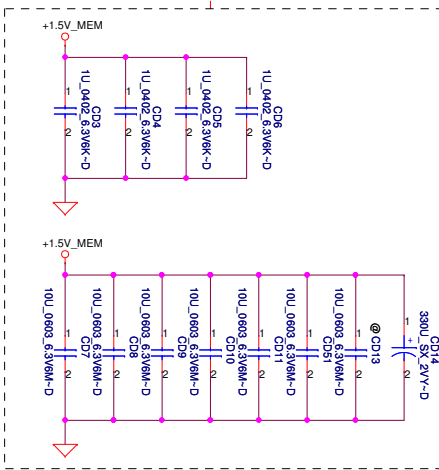


Populate RD1, De-Populate RD7 for Intel DDR3 VREFDQ multiple methods M1
Populate RD7, De-Populate RD1 for Intel DDR3 VREFDQ multiple methods M3

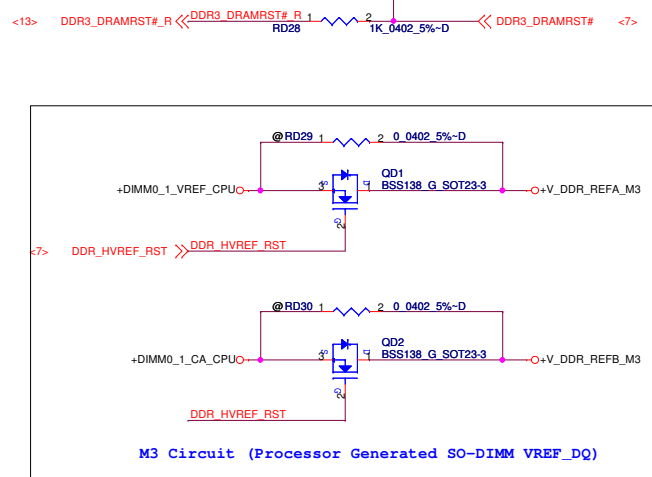
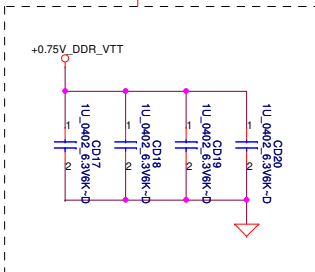
All VREF traces should have 10 mil trace width

<8> DDR_A_DQS#0[0..7] <<>>
<8> DDR_A_D[0..63] <<>>
<8> DDR_A_DQS#0[0..7] <<>>
<8> DDR_A_MA[0..15] <<>>

Layout Note:
Place near JDIMM1



Layout Note:
Place near JDIMM1.203,204

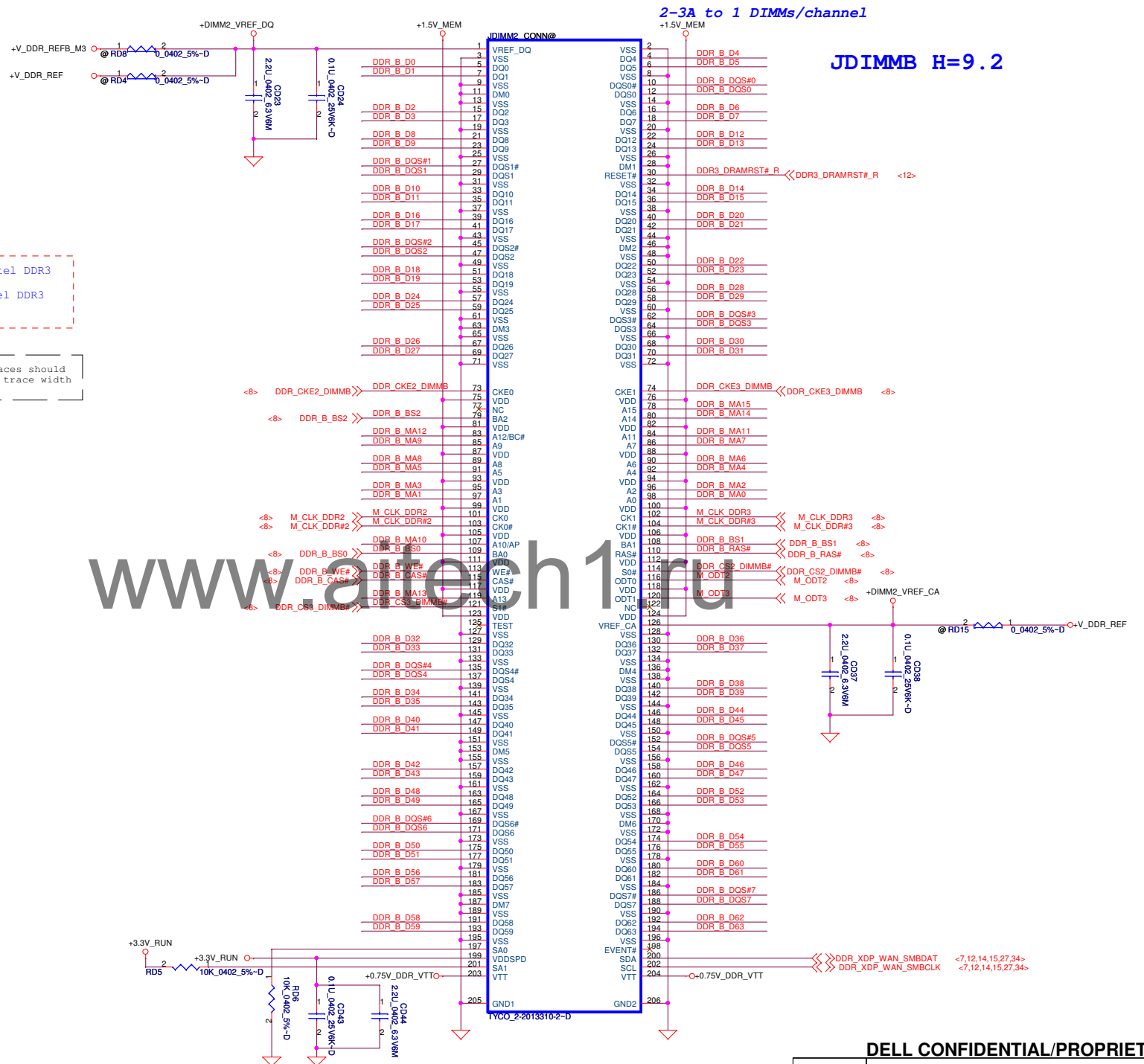


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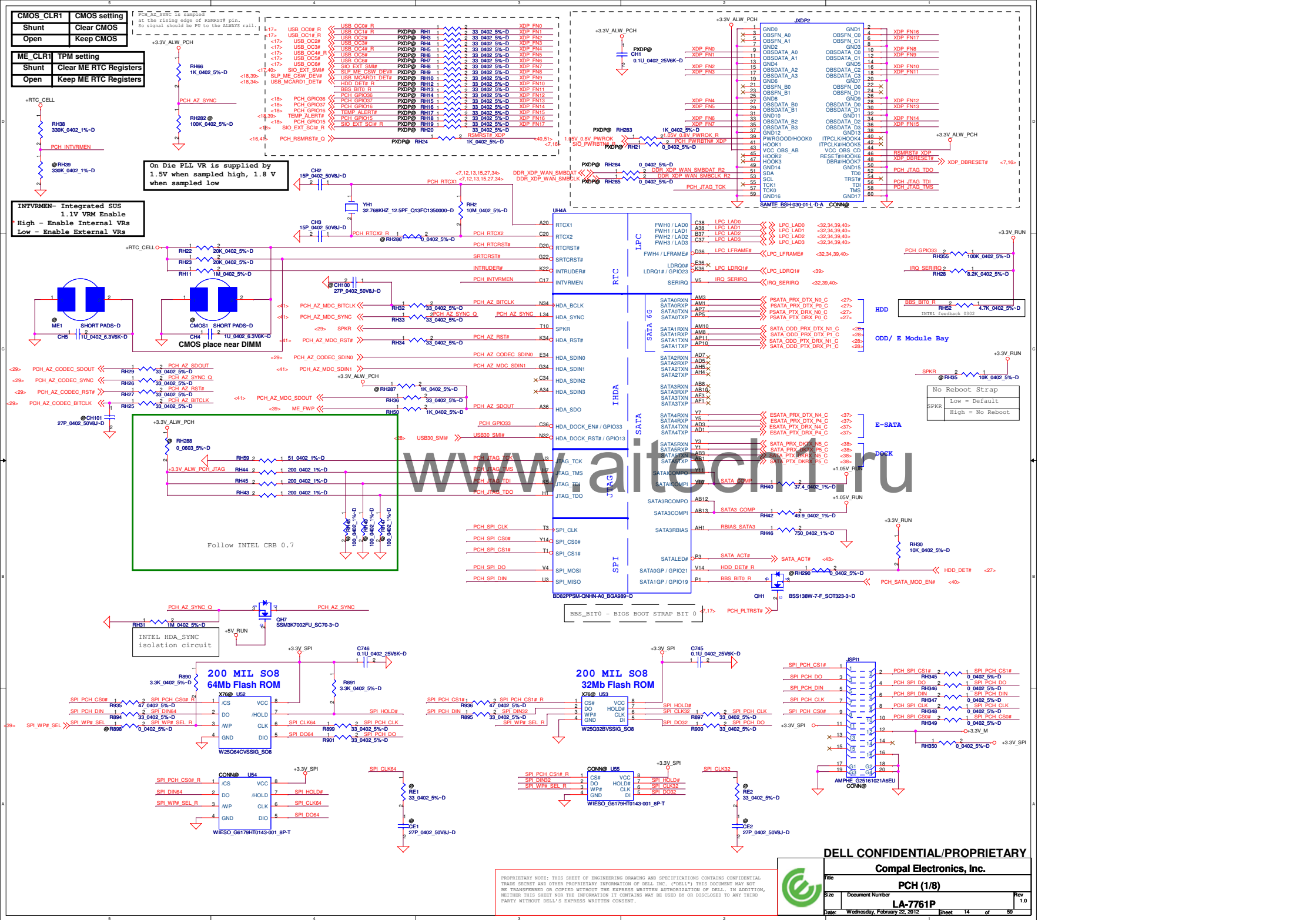


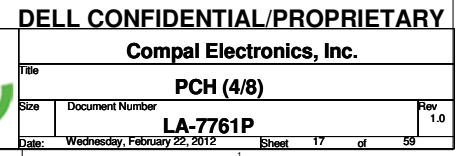
Compal Electronics, Inc.			
DDRIII-SODIMM SLOT1			
LA-7761P	Rev 1.0		
Date: Wednesday, February 22, 2012	Sheet 12	of 59	

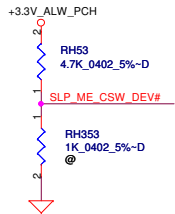


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	Title				
	DDR3II-SODIMM SLOT2				
	Size	Document Number			Rev
		LA-7761P			1.0
Date:	Wednesday, February 22, 2012		Sheet	13	of 59



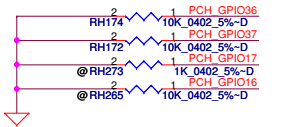
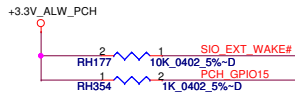




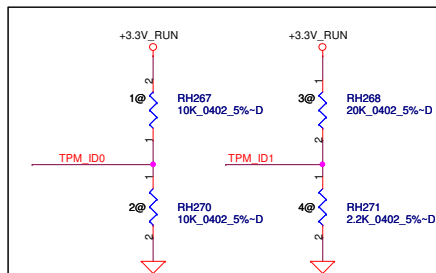
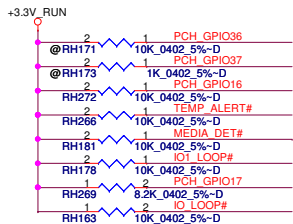
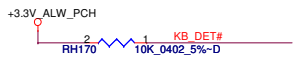
Note: PCH has internal pull up 20k ohm on E3_PAID_TS_DET# (GPIO27)

SLP_ME_CSW_DEV# PLL ON DIE VR ENABLE

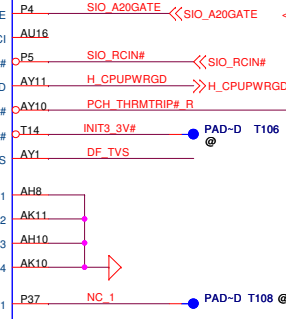
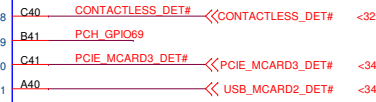
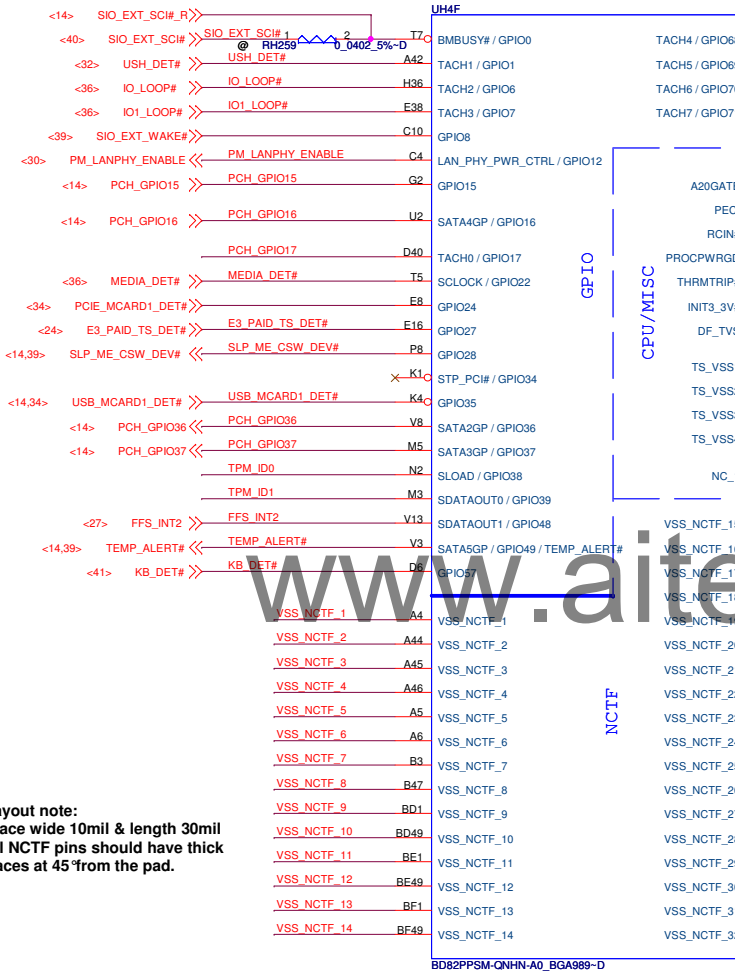
ENABLED - HIGH DEFAULT
DISABLED - LOW



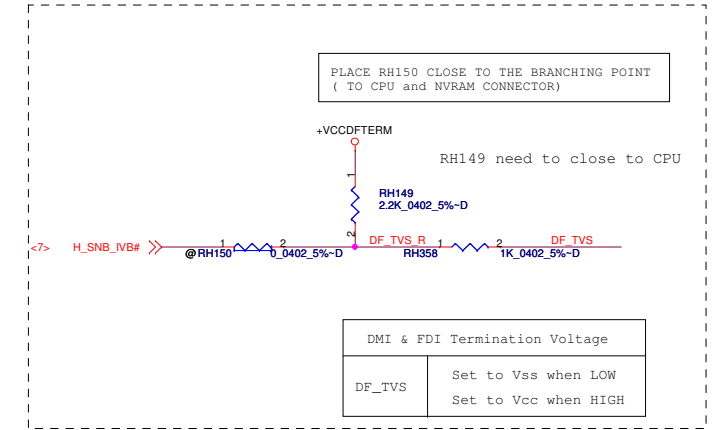
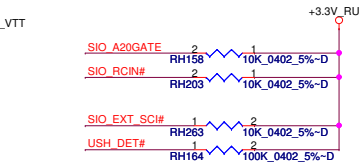
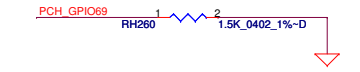
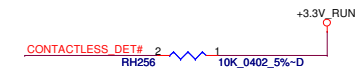
Layout note:
Trace wide 10mil & length 30mil
All NCTF pins should have thick traces at 45° from the pad.

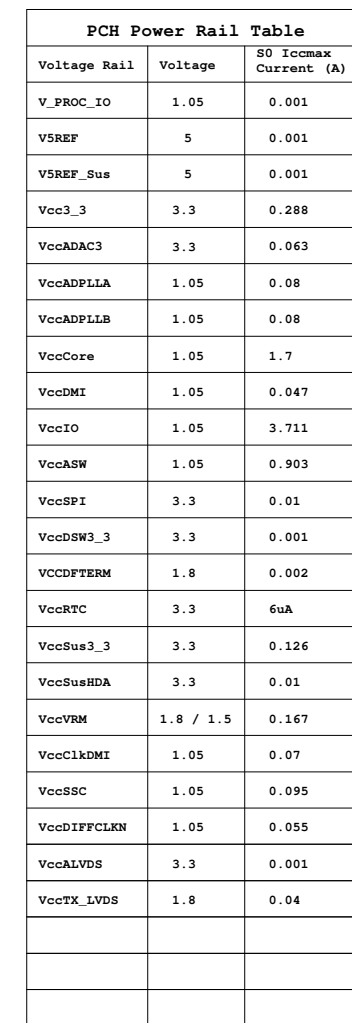


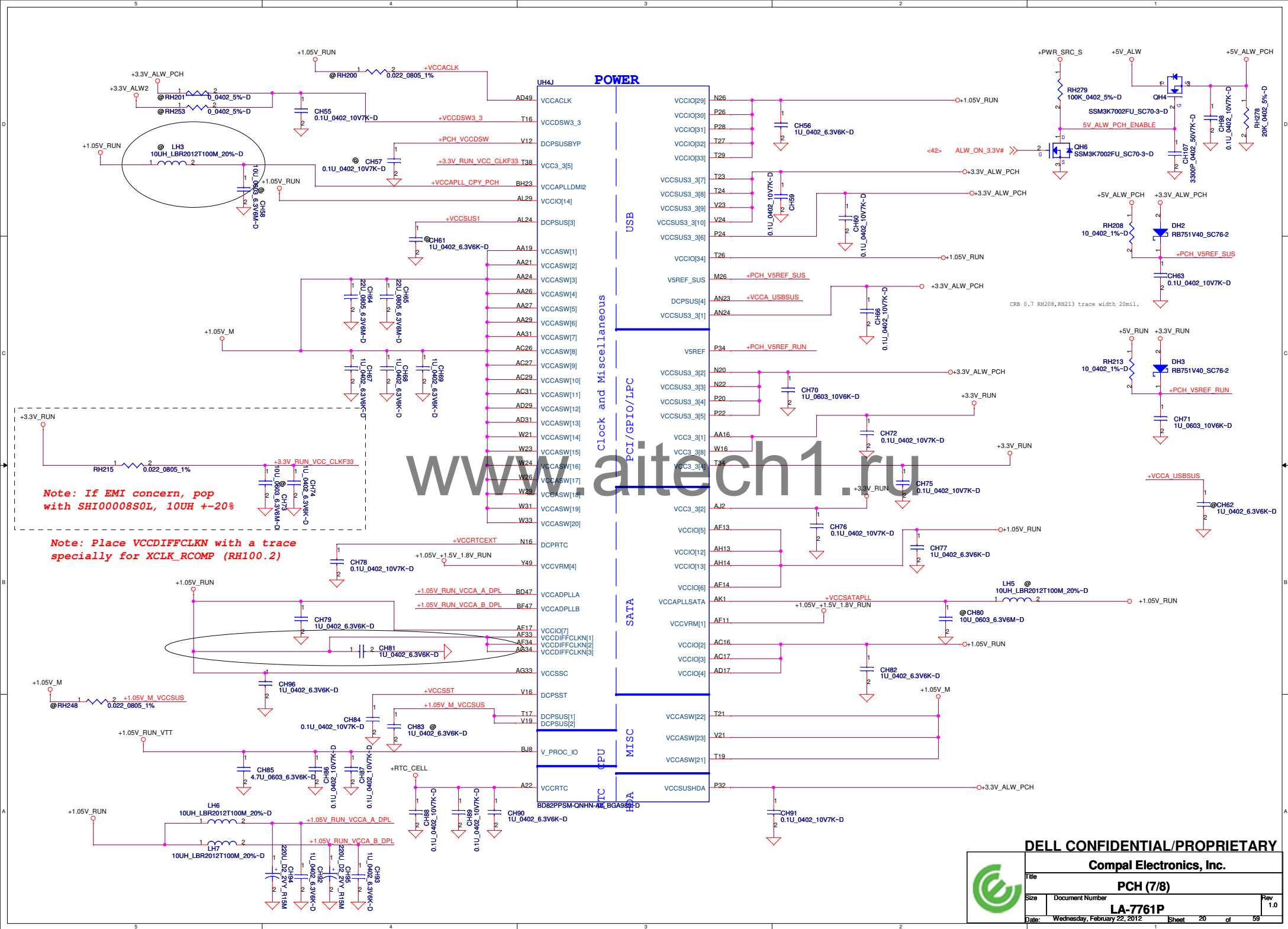
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China TPM	0	0
No TPM, No China TPM	0	1
TBD		
TPM	1	1

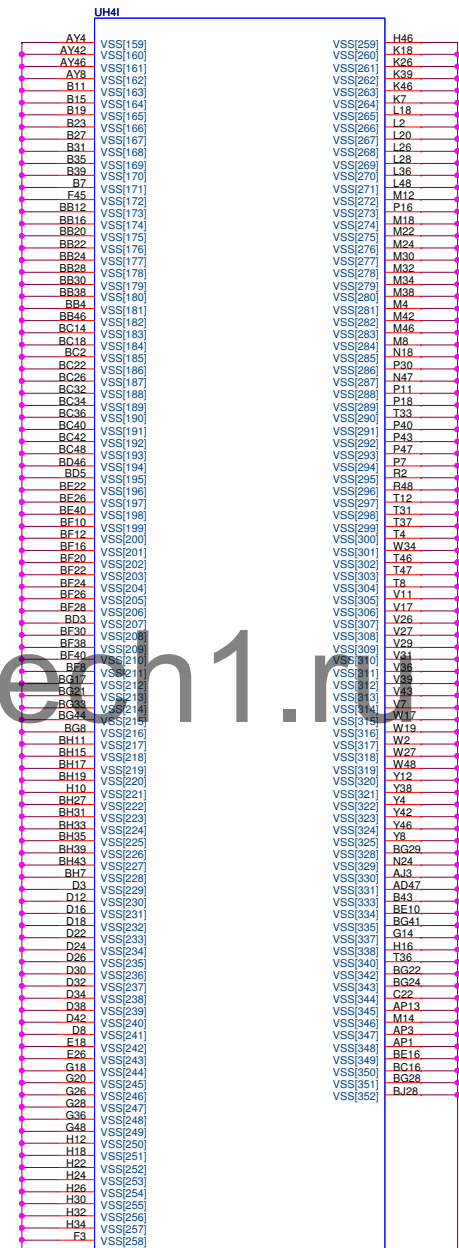
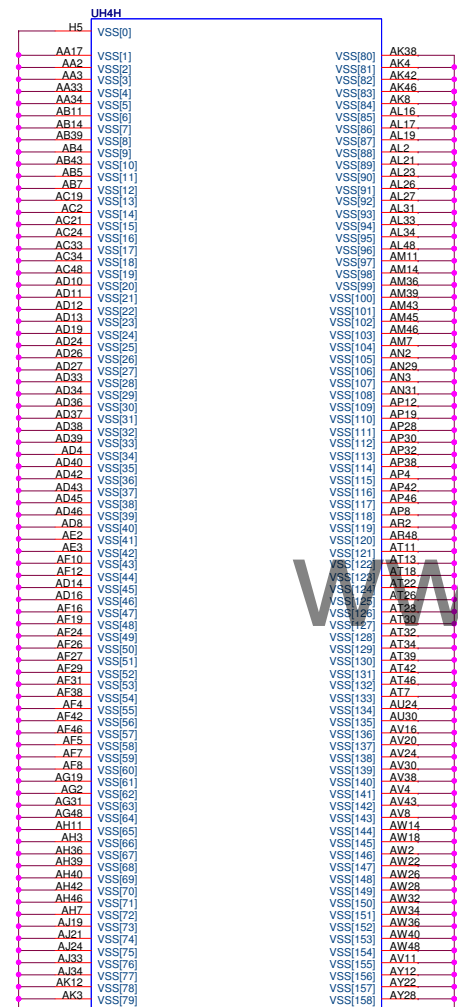


Layout note:
Trace wide 10mil & length 30mil
All NCTF pins should have thick traces at 45° from the pad.









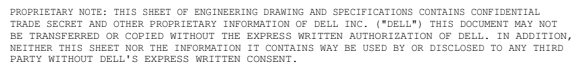
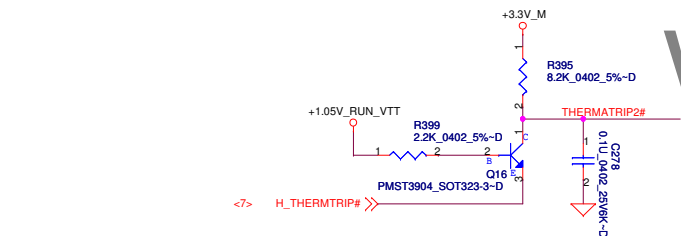
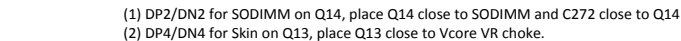
VSS[119]	AR48	BF30	VSS[207]
VSS[120]	AT11	BF38	VSS[208]
VSS[121]	AT13	BF40	VSS[209]
VSS[122]	AT18	BF8	VSS[210]
VSS[123]	AT22	BG17	VSS[212]
VSS[124]	AT26	BQ21	VSS[213]
VSS[125]	AT23	BQ36	VSS[214]
VSS[126]	AT86	BQ44	VSS[215]
VSS[127]			

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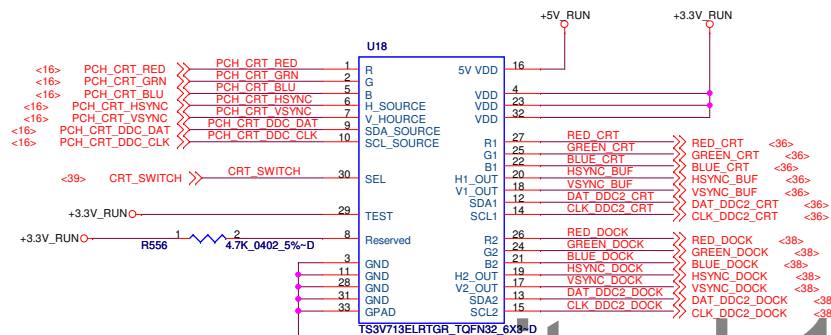
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PCH (8/8)			
Size	Document Number		Rev
	LA-7761P		1.0
Date:	Wednesday, February 22, 2012	Sheet 21 of 59	

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Rev
1

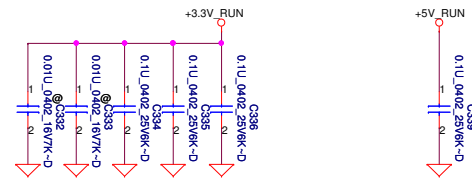
Date: Wednesday, February 22, 2012 Sheet 22 of 59

SW for MB/DOCK




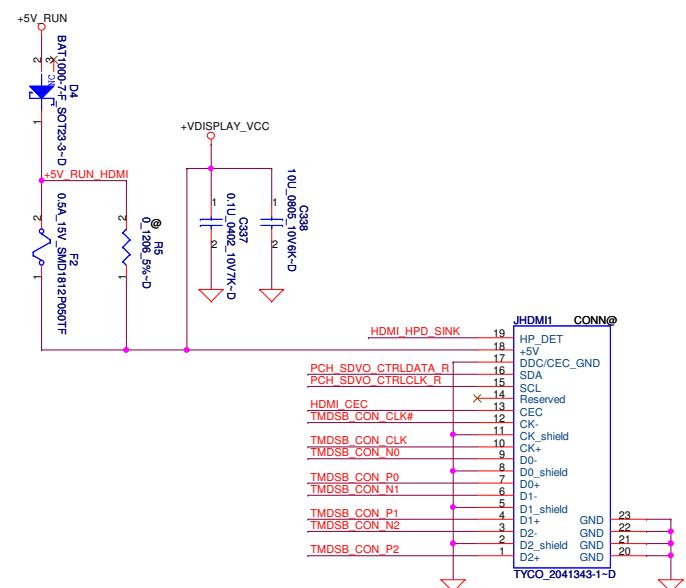
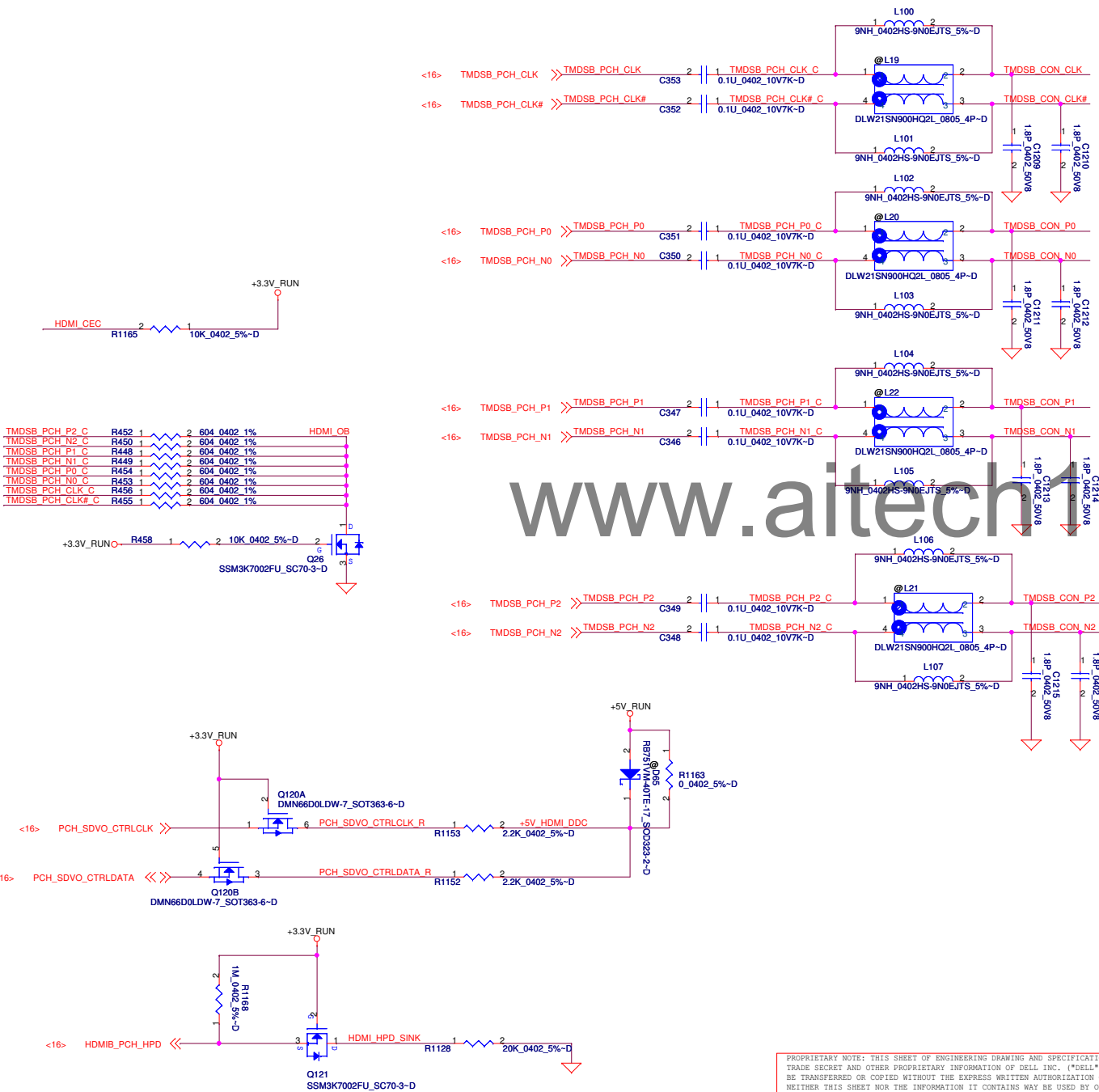
www.aitech1.ru

SEL1/SEL2	Chanel	Source
0	A=B1	MB
1	A=B2	APR/SPR



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		Compal Electronics, Inc.	
		Title	
Size	Document Number	Rev	
	LA-7761P	1.0	
Date:	Wednesday, February 22, 2012	Sheet	23 of 59



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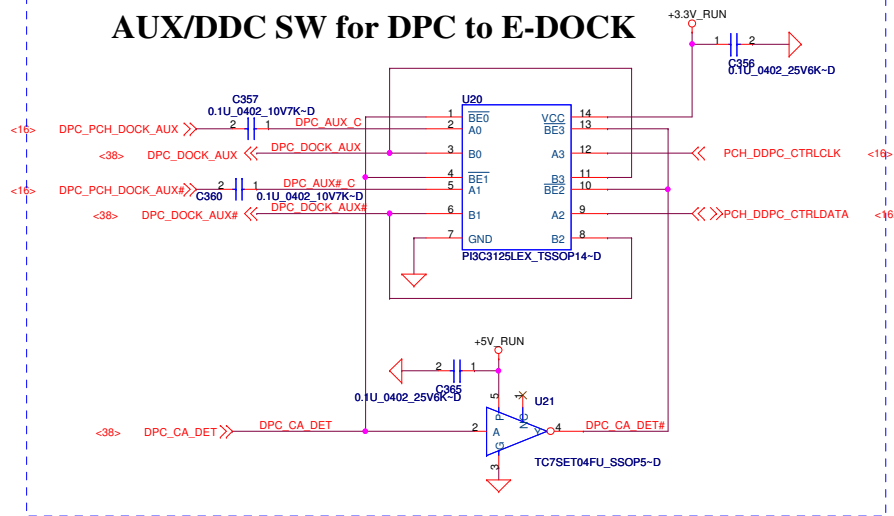
HDMI port

LA-7761P

Date: Wednesday, February 22, 2012 Sheet 25 of 59

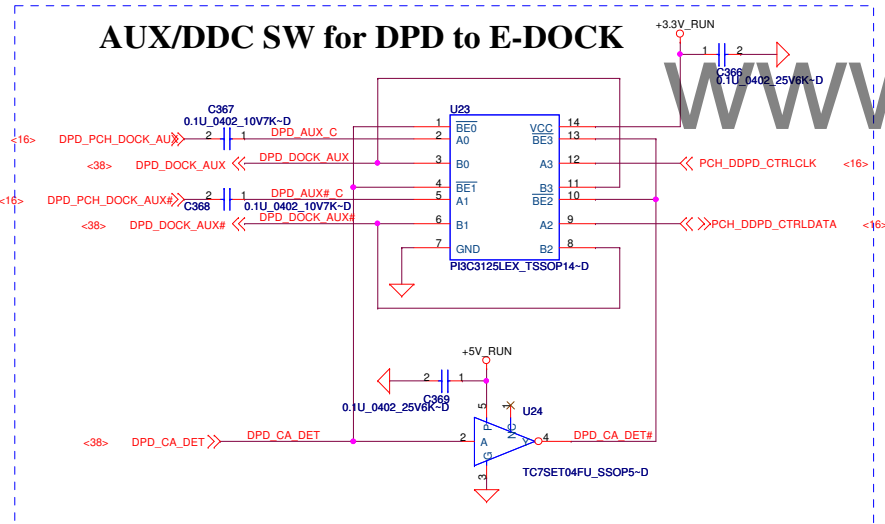
Size	Document Number	Rev
		1.0

AUX/DDC SW for DPC to E-DOCK

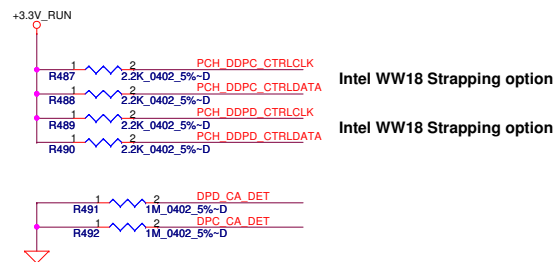


There is a new die for PI3C3125. Sample available on May.

AUX/DDC SW for DPD to E-DOCK



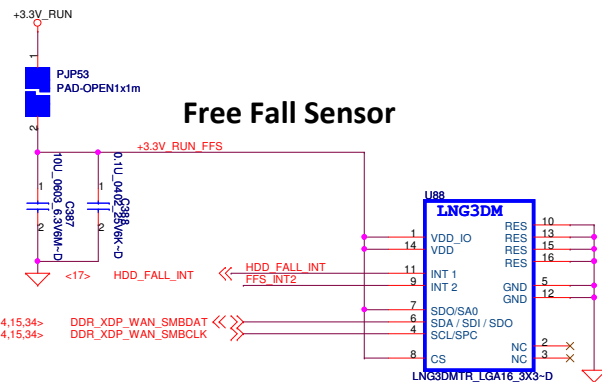
www.vinafix.vn



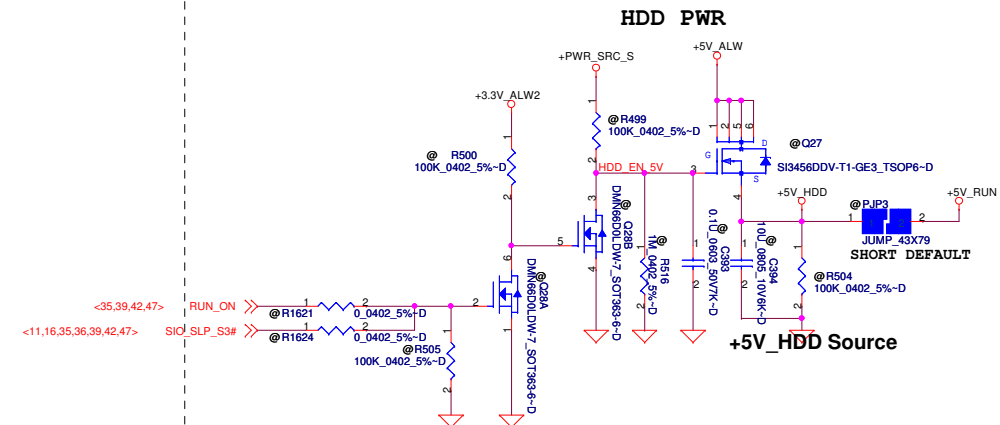
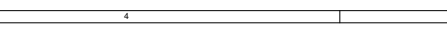
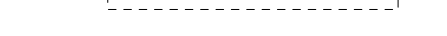
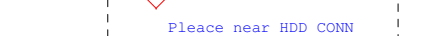
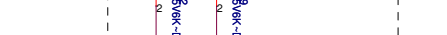
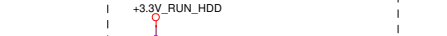
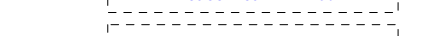
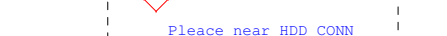
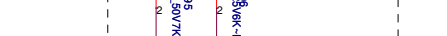
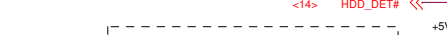
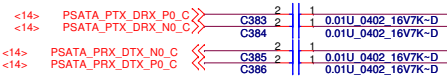
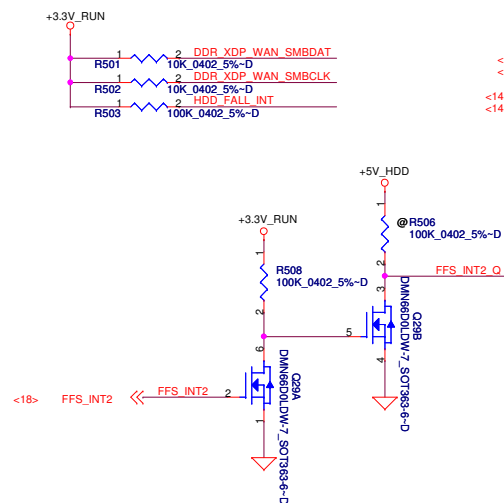
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Size	Document Number	Rev	
	LA-7761P	1.0	
Date:	Wednesday, February 22, 2012	Sheet	26 of 59



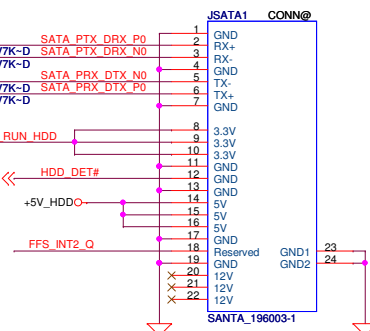
Free Fall Sensor



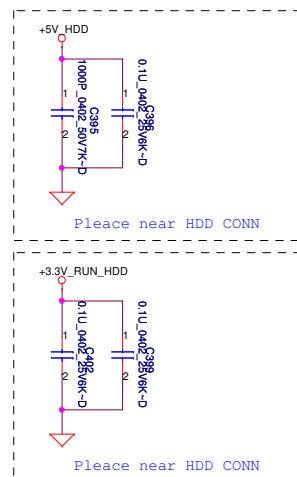
HDD PWR

<35,39,42,47>
<11,16,35,36,39,42,47>

For HDD Temp.



Main SATA +5V Default



Pleace near HDD CONN

Pleace near HDD CONN

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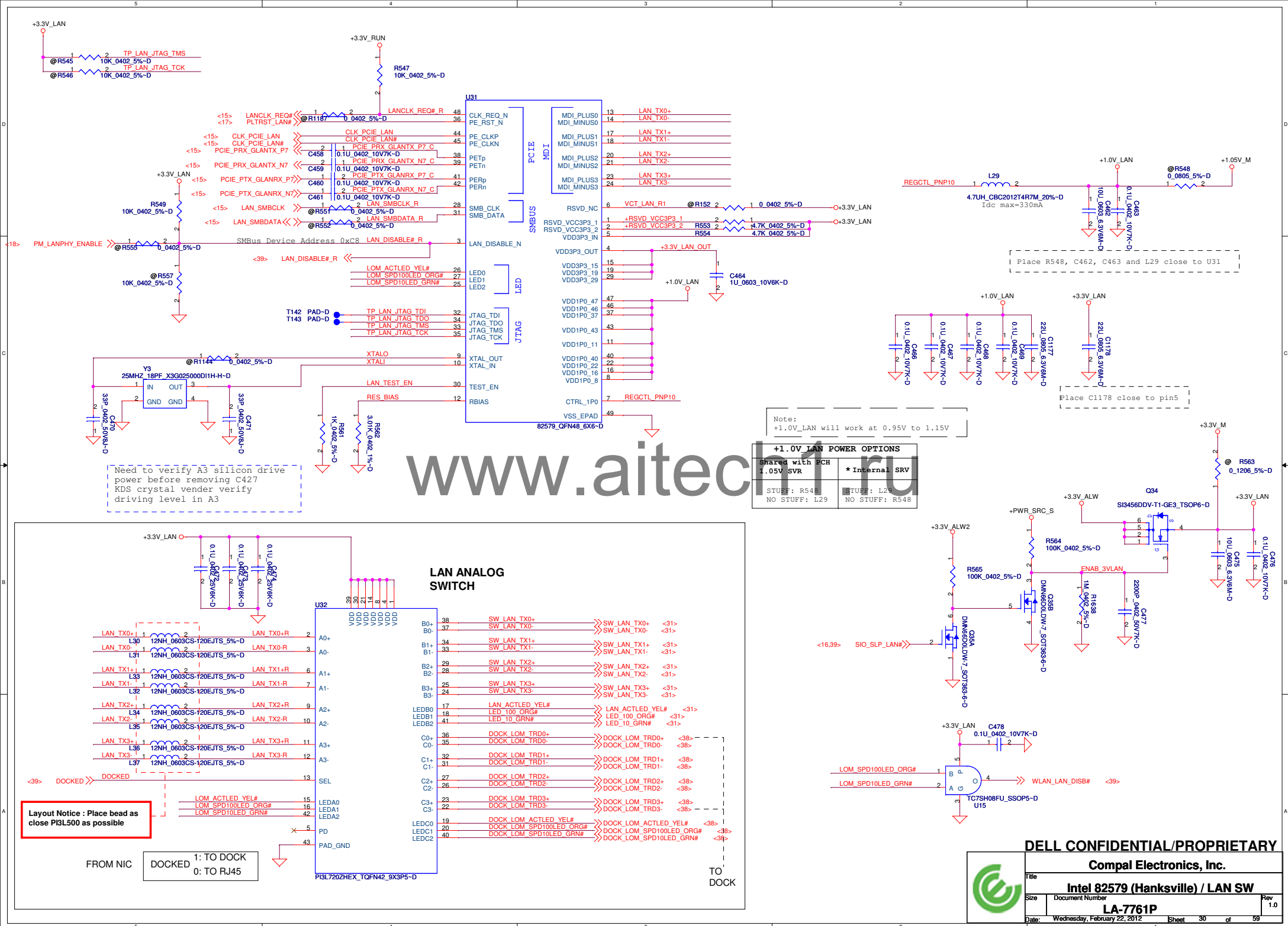
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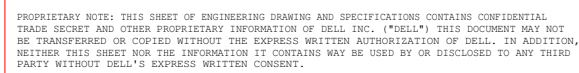
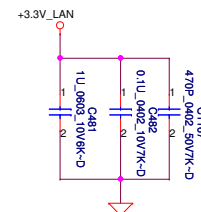
Compal Electronics, Inc.

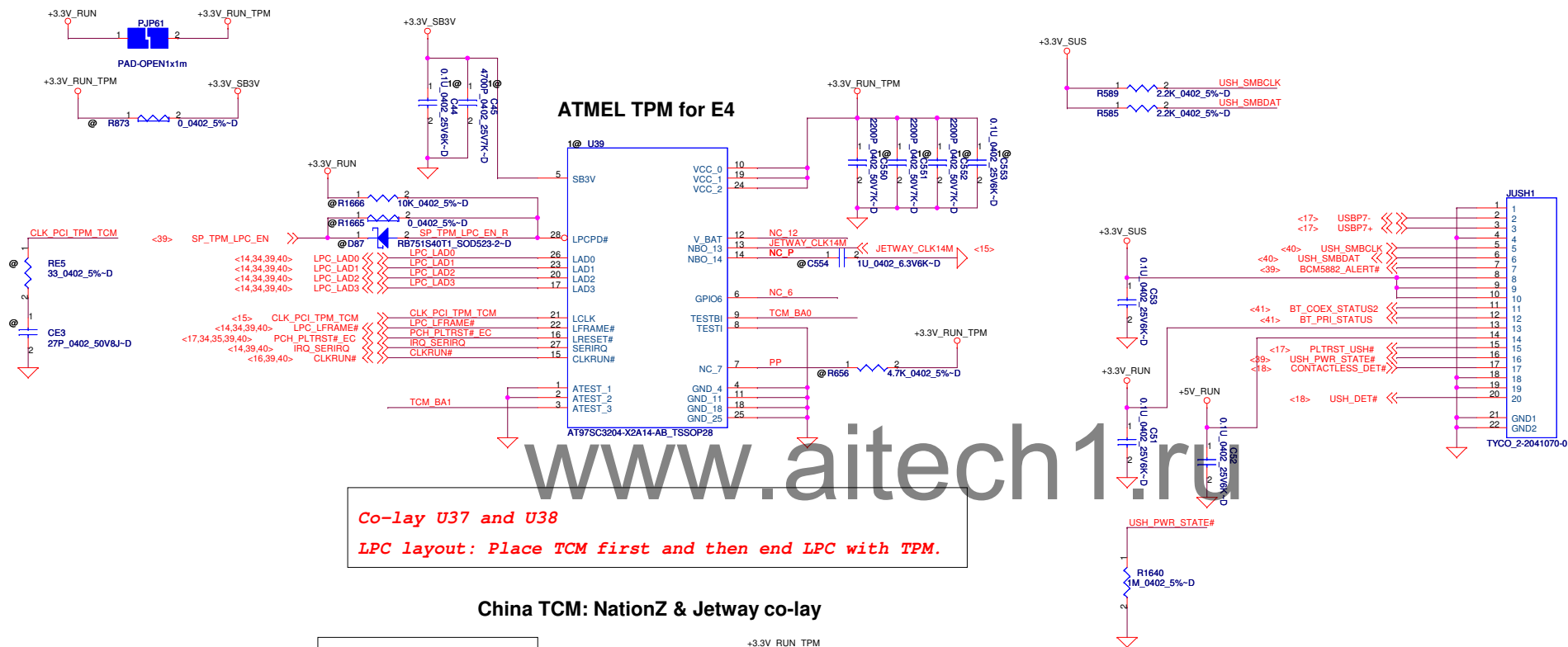
HDD CONNECTOR

LA-7761P

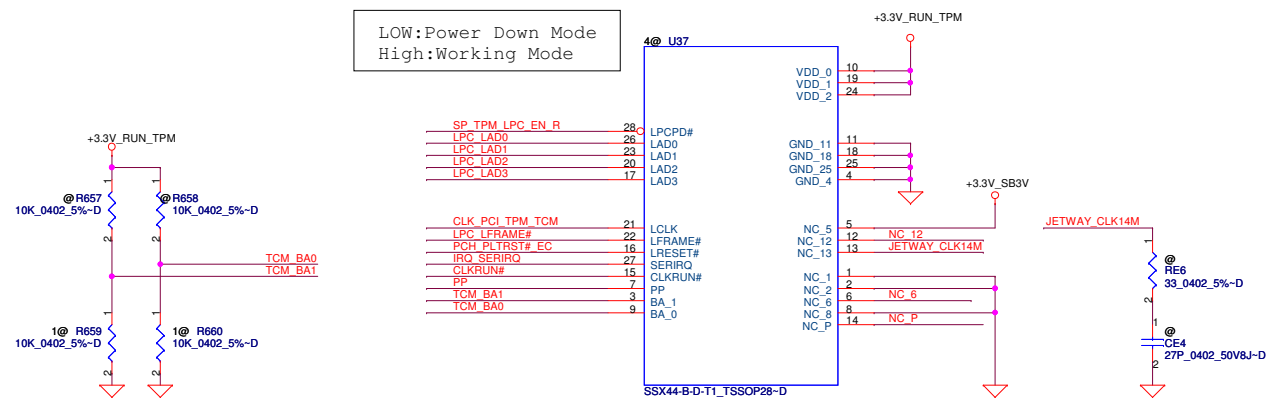
Date: Wednesday, February 22, 2012 Sheet 27 of 59







China TCM: NationZ & Jetway co-lay



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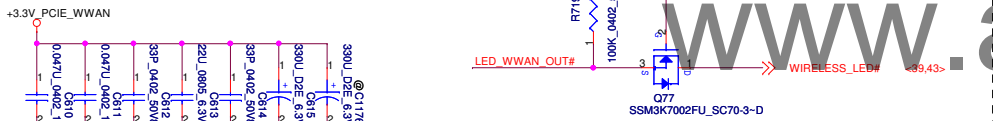
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Title				
TPM/TCM				
Size	Document Number			Rev
	LA-7761P			1.0
Date:	Wednesday, February 22, 2012		Sheet	32 of 59

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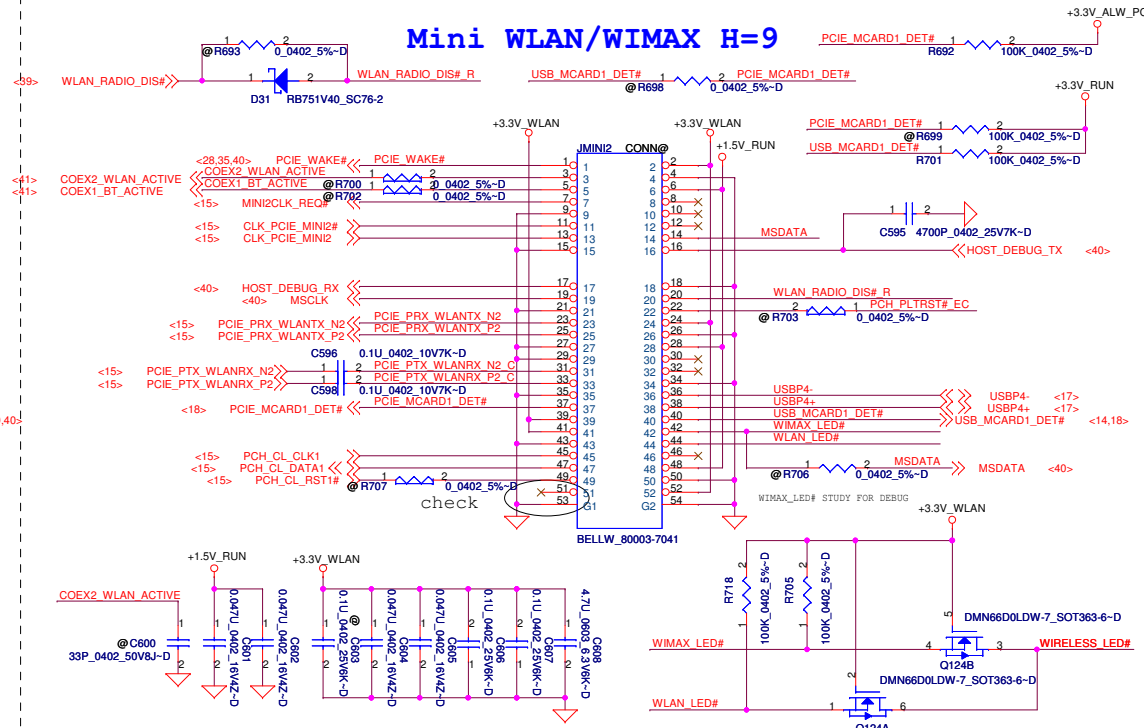
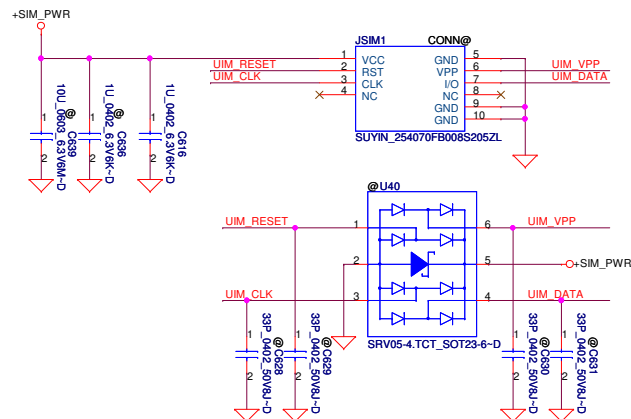
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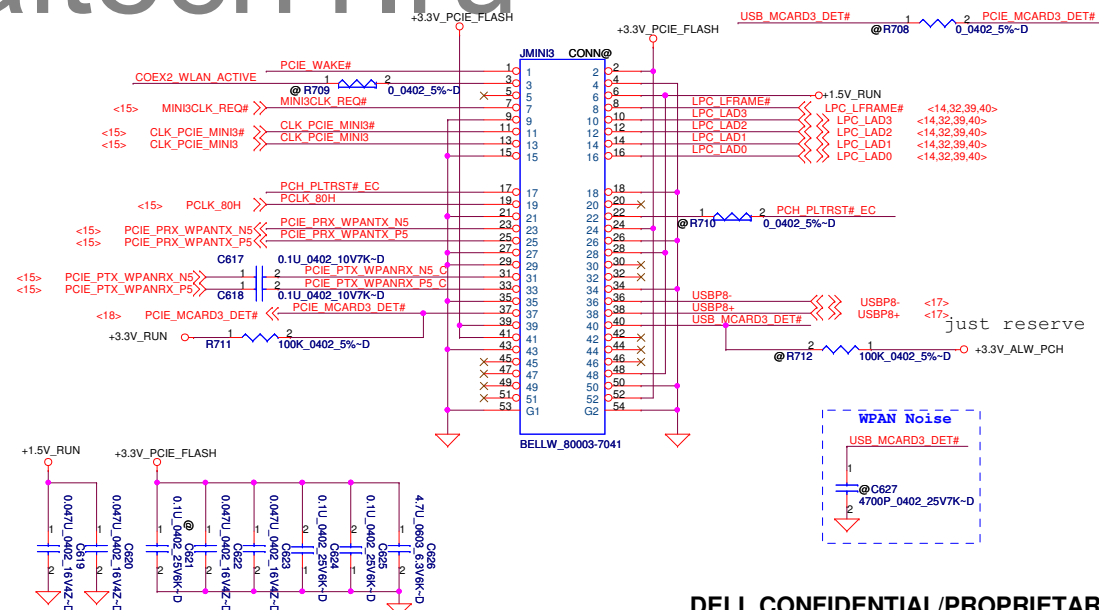


PWR Rail	Voltage Tolerance	Primary Power		Aux Power
		Peak	Normal	Normal
+3.3V	+−9%	1000	750	
+3.3Vaux	+−9%	330	250	250 (Wake enable) 5 (Not wake enable)
+1.5V	+−5%	500	375	NA

SIM Card Push-Push



1/2 Minicard Pink Pather/60GHz Card H=9



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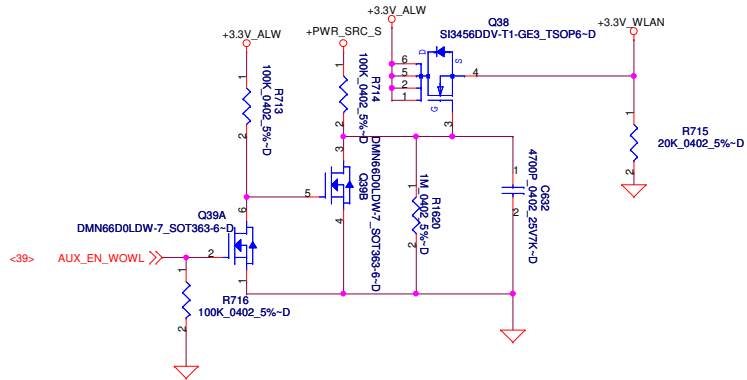
Compal Electronics, Inc.

Mini Card

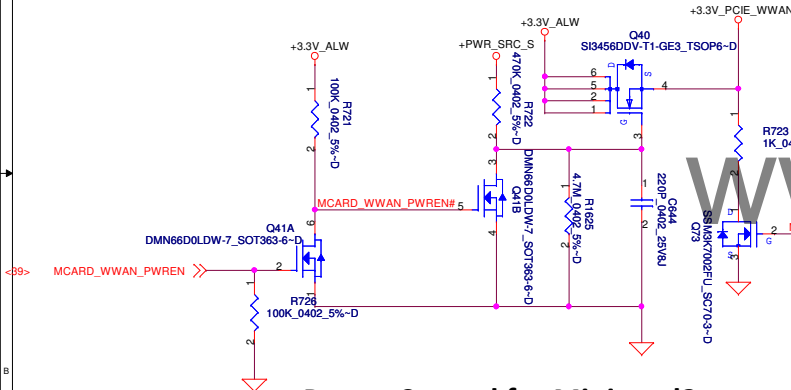
LA-7761P

Date: Wednesday, February 22, 2012 Sheet 34 of 59

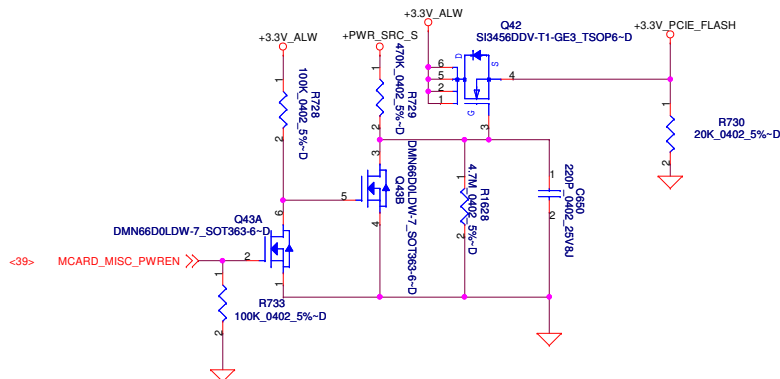
Power Control for Mini card1



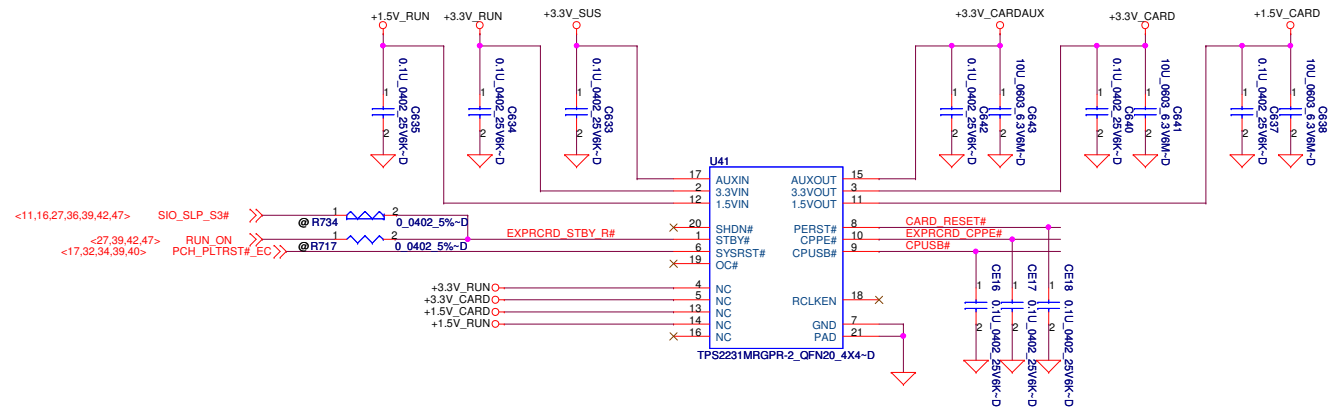
Power Control for Mini card2



Power Control for Mini card3

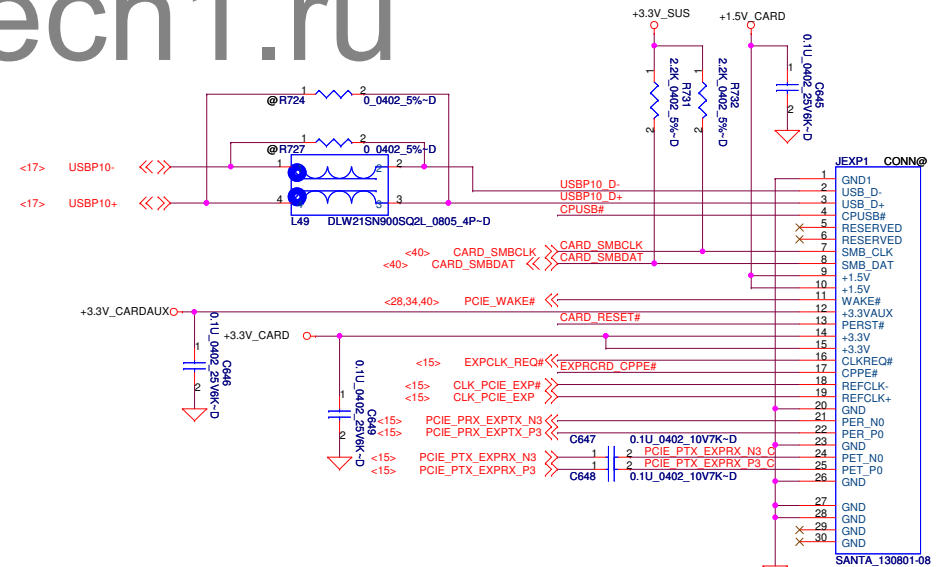


Express Card PWR S/W



Note: Add connection on pin4, pin5, pin13 and pin14 to support GMT 2nd source part

Express Card Conn.



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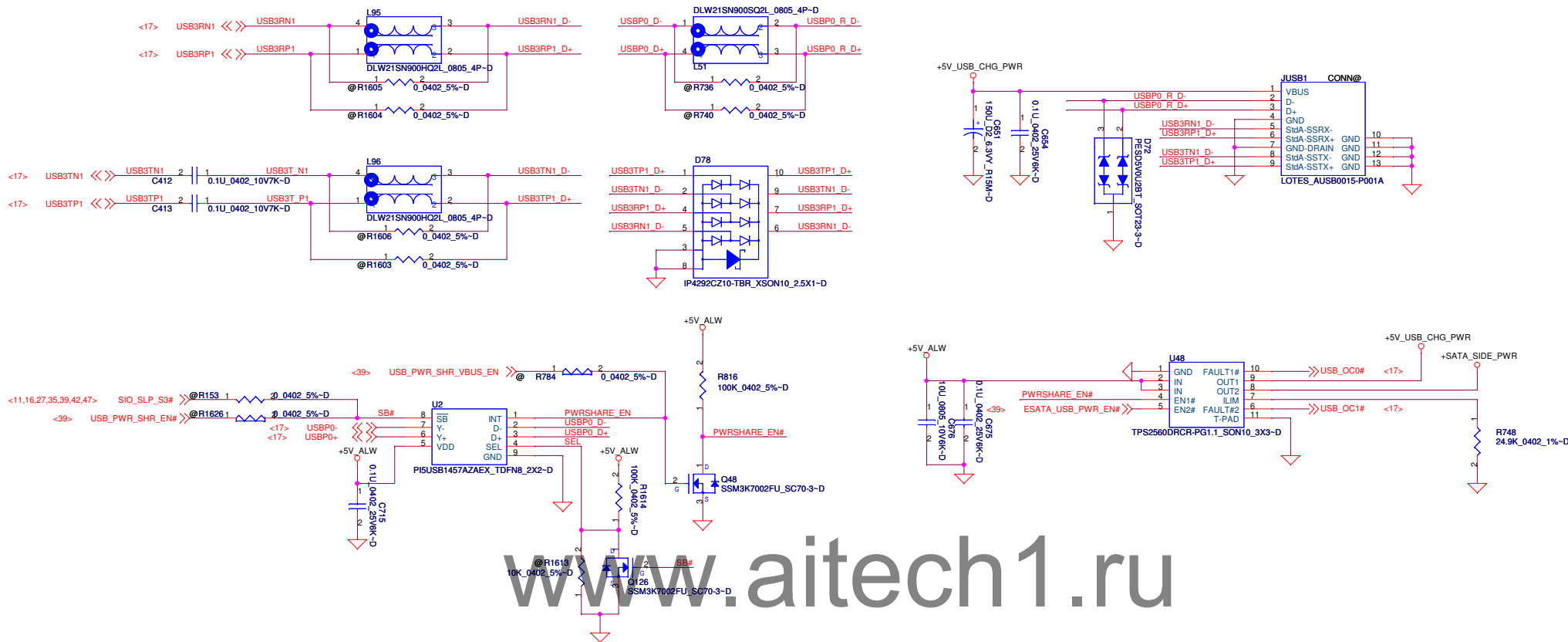
Compal Electronics, Inc.

PCIE-SATA SW / PCIE PWR

LA-7761P

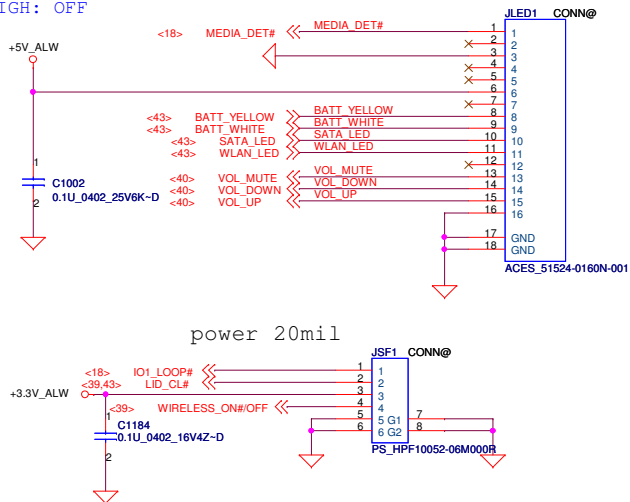
Wednesday, February 22, 2012 Sheet 35 of 59

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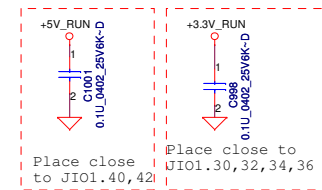
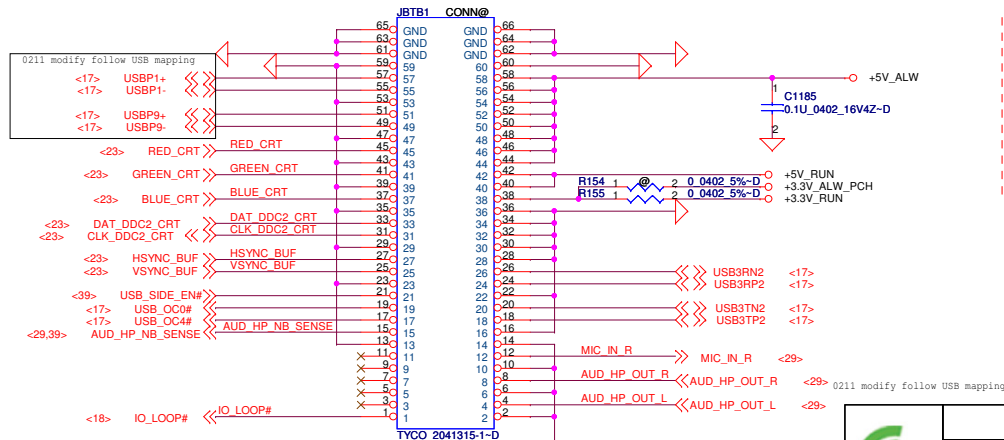


MEDIA BOARD

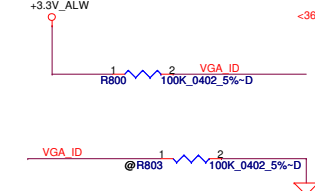
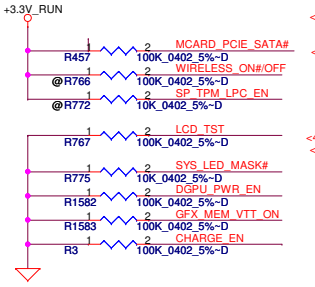
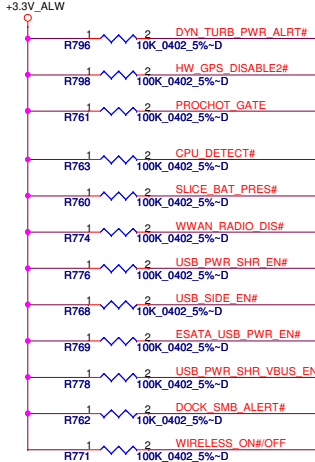
Default on,
WIRELESS_ON/OFF#:
LOW: ON
HIGH: OFF



USBx2 / USB3.0x1 / CRT / AUDIO JACK IO BOARD

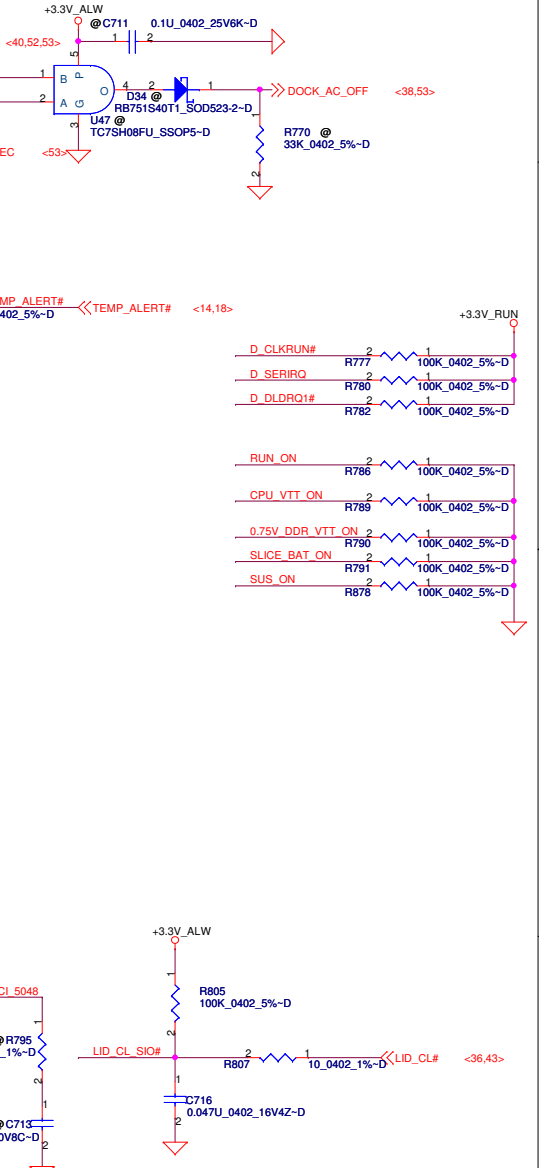
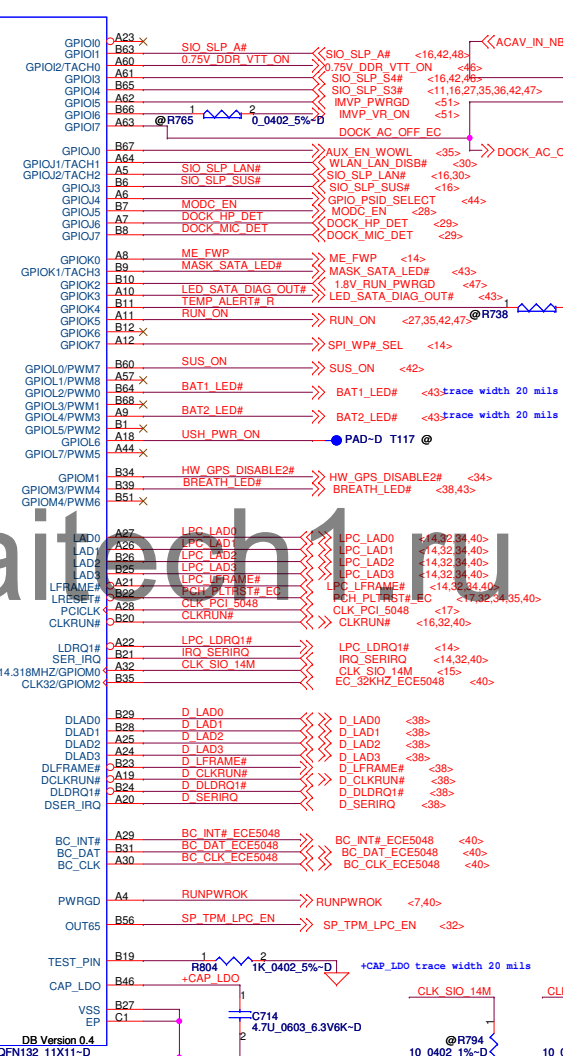
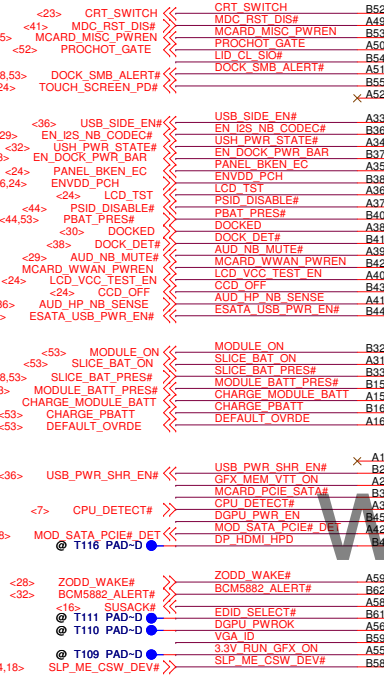
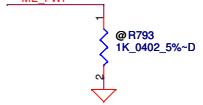


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Title	IO BOARD/ USB3.0		
Size	Document Number	Rev	
	LA-7761P	1.0	
Date:	Wednesday, February 22, 2012	Sheet	36 of 59



VGA_ID0	
Discrete	0
UMA	1

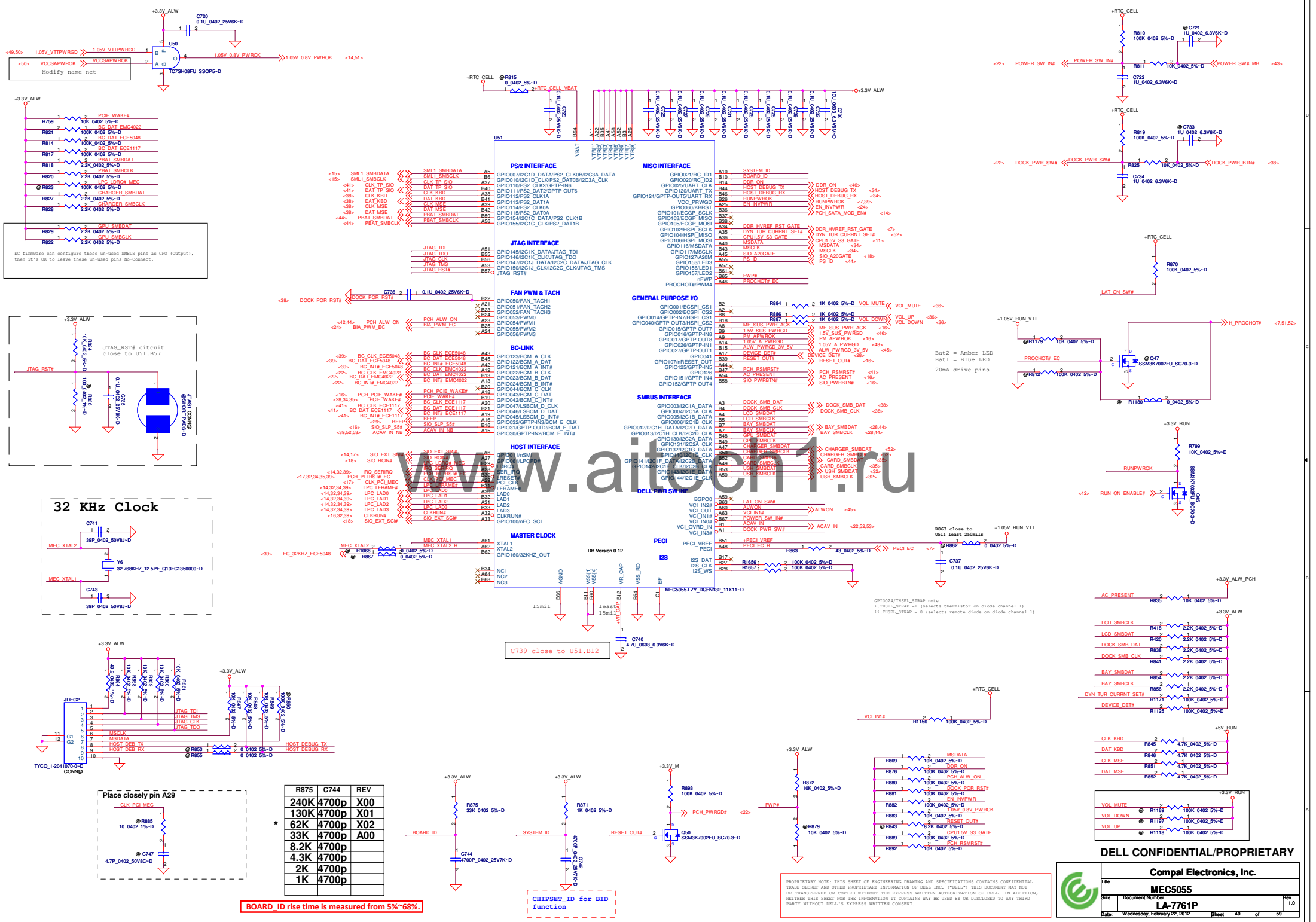
ME_FWP PCH has internal 20K PD.
(suspend power rail)



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LA-7761P			
Size	Document Number	Rev	
		1.0	
Date:	Wednesday, February 22, 2012	Sheet	39 of 59




BOARD_ID rise time is measured from 5%~68%.

CHIPSET_ID for BID function

R875	C744	REV
240K 4700p	X00	
130K 4700p	X01	
62K 4700p	X02	
33K 4700p	A00	
8.2K 4700p		
4.3K 4700p		
2K 4700p		
1K 4700p		

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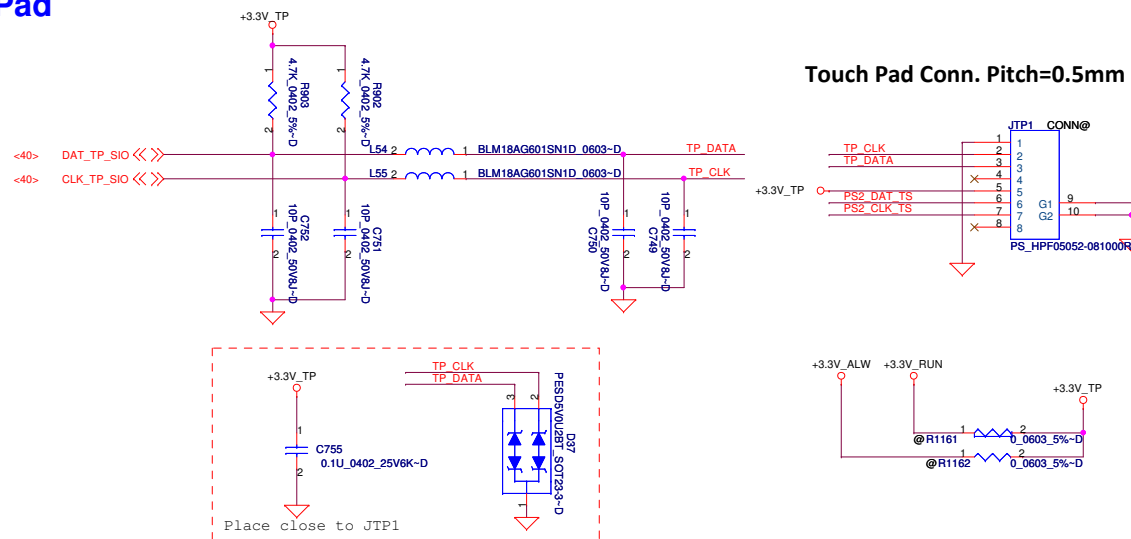
MEC5055

LA-7761P

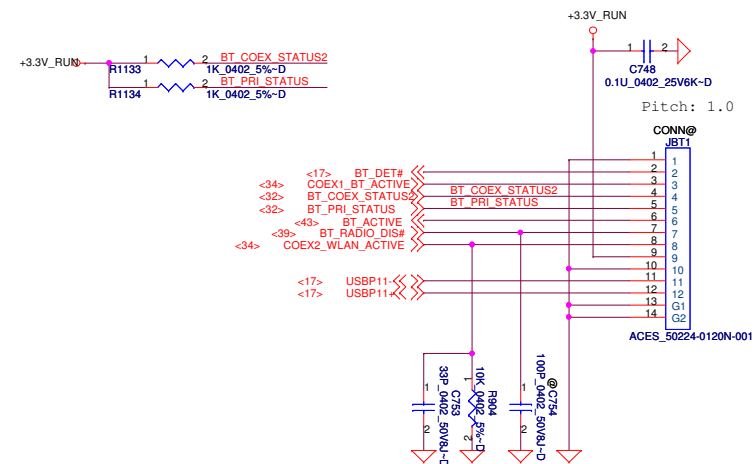
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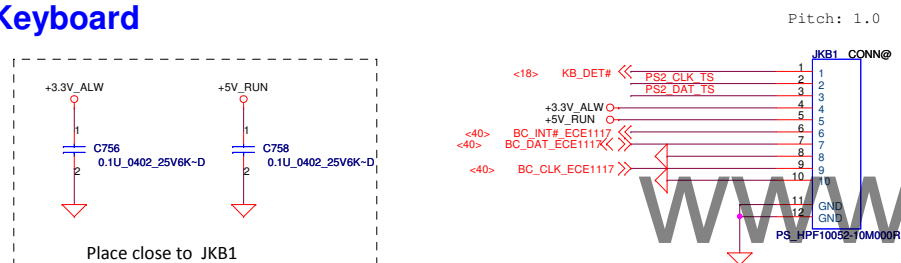
Touch Pad



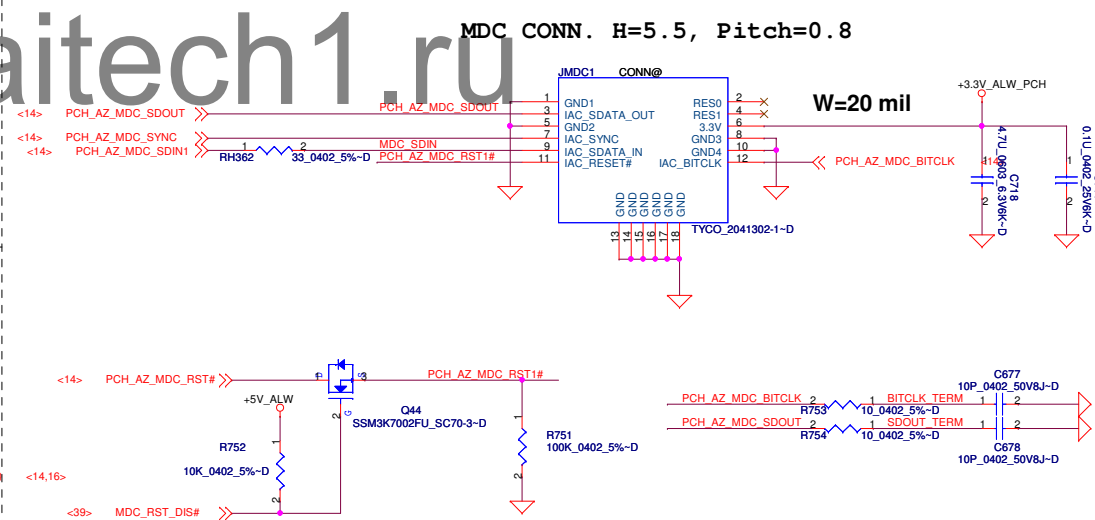
BlueTooth



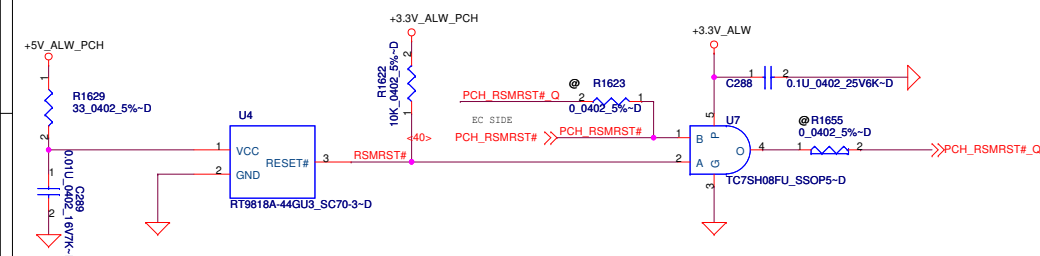
Keyboard



MDC



RSMRST#



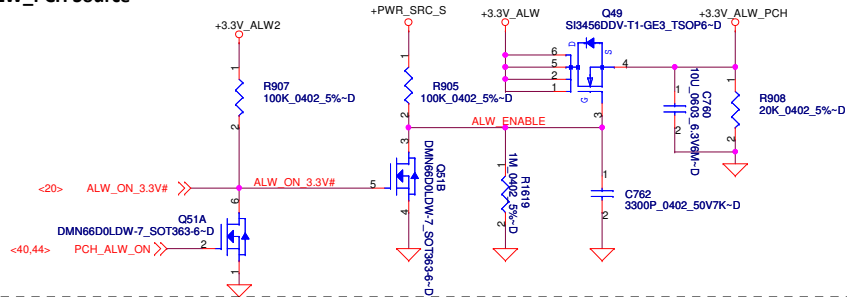
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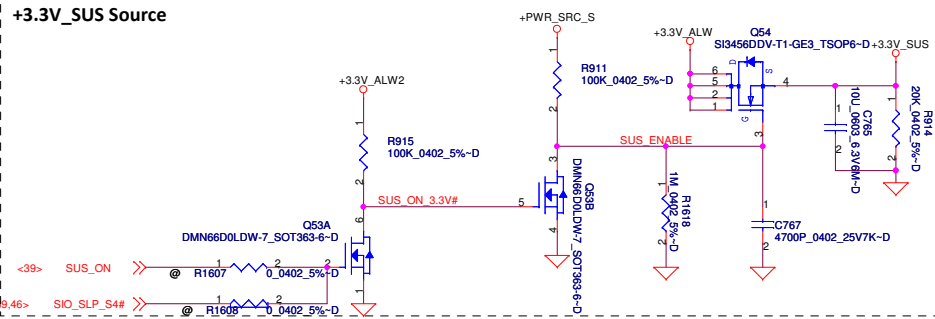
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Compal Electronics, Inc.			
Title			
Int KB/TP/BT/RSMRST/MDC			
Size			
LA-7761P			
Date: Wednesday, February 22, 2012			
Sheet 41 of 59			

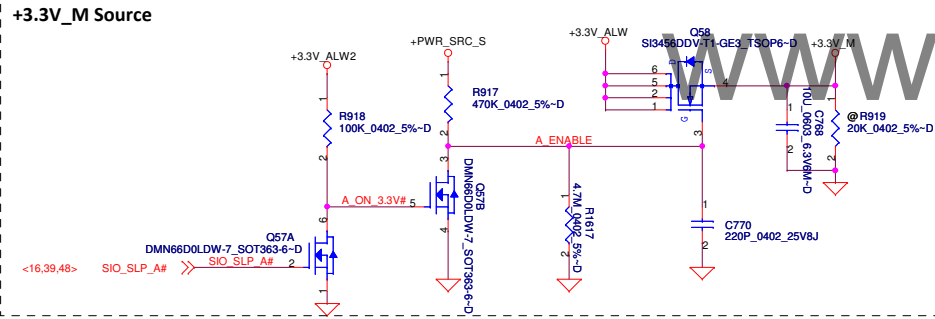
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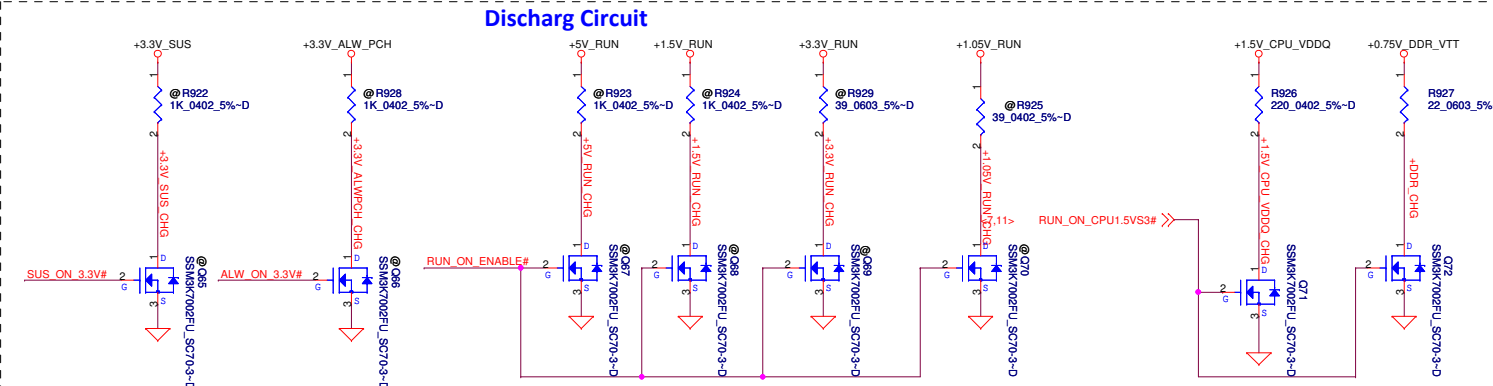
+3.3V_SUS Source



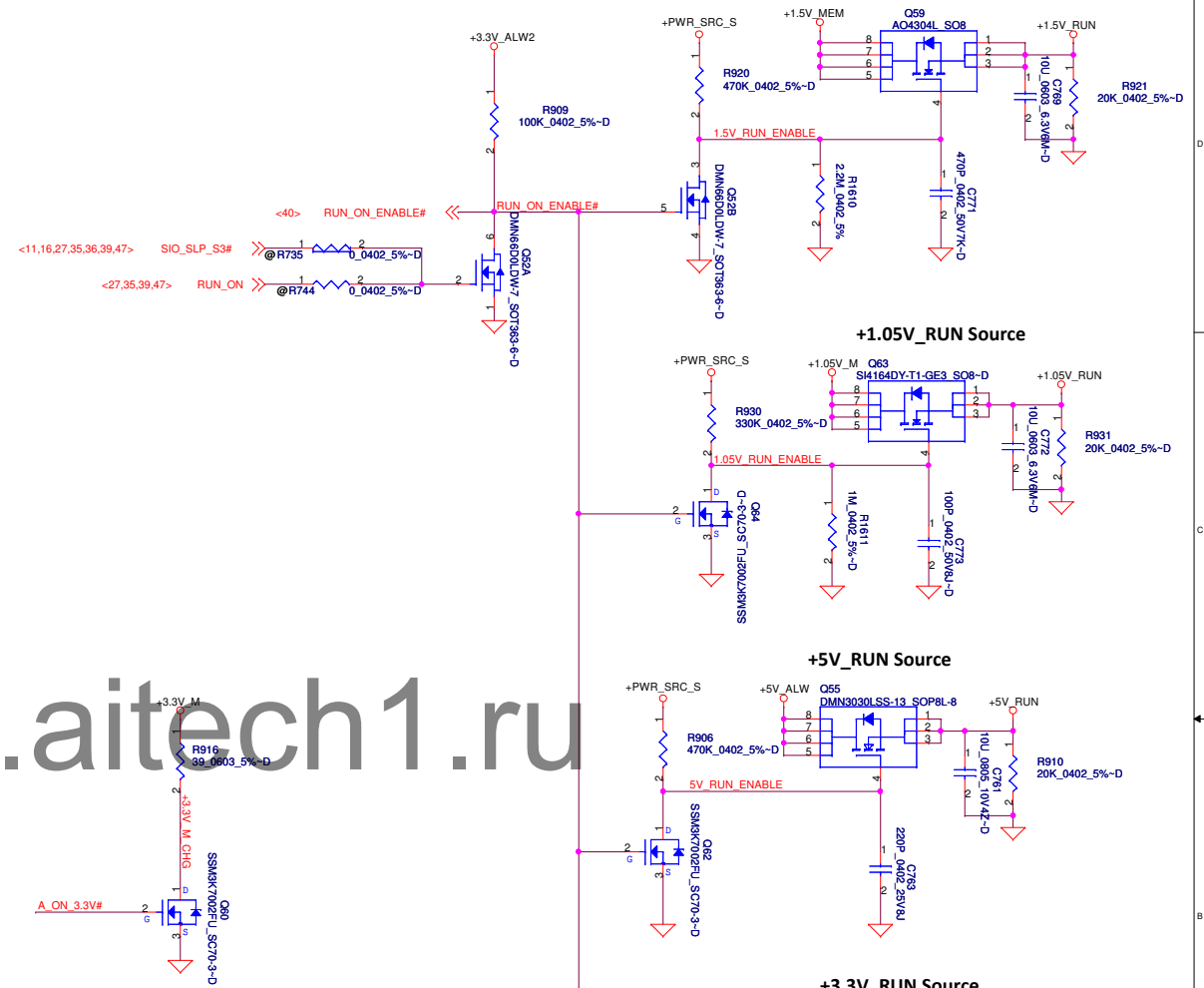
+3.3V_M Source



Discharg Circuit



DC/DC Interface



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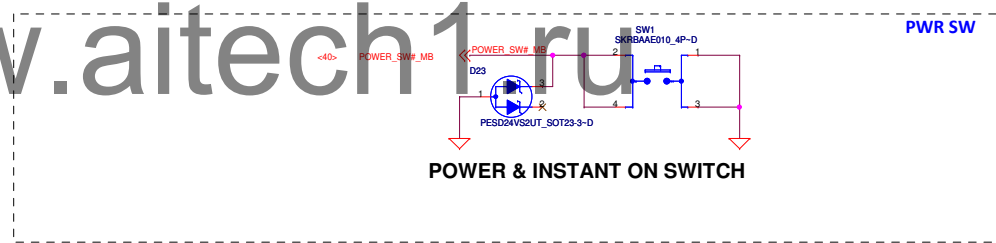
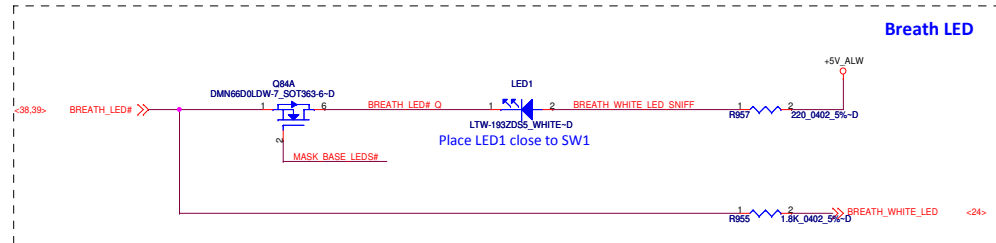
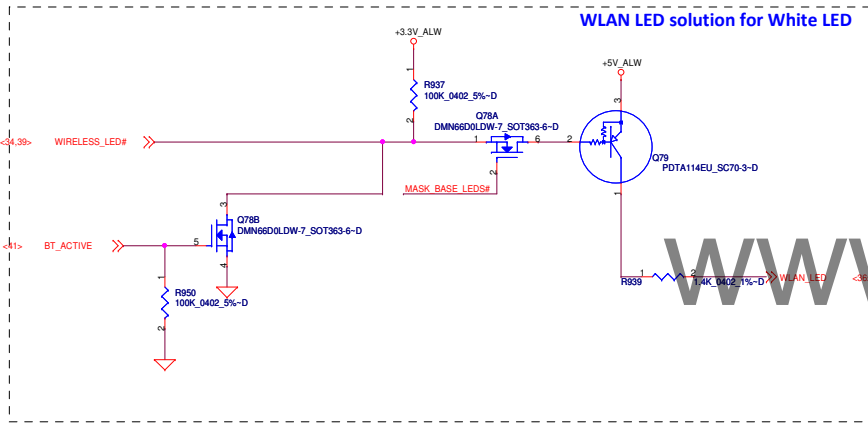
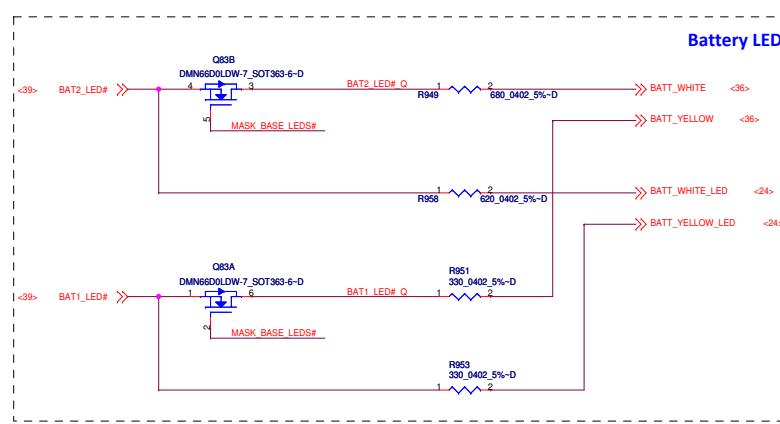
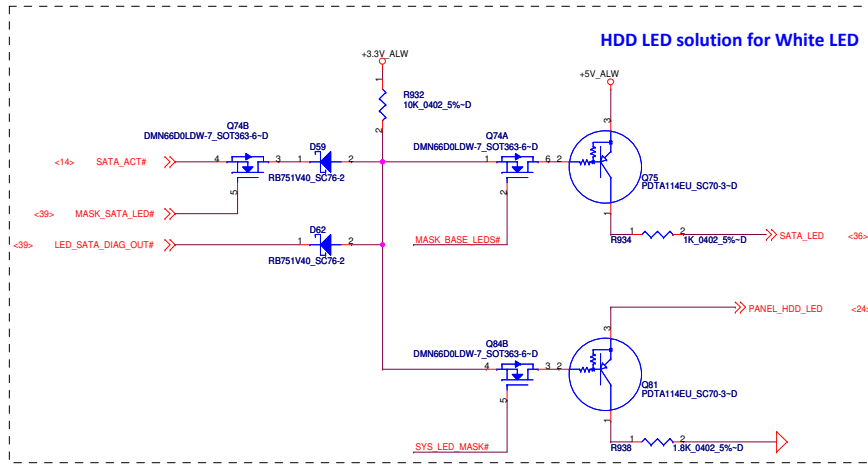
POWER CONTROL

LA-7761P

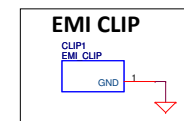
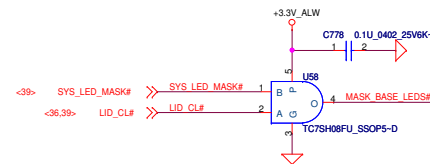
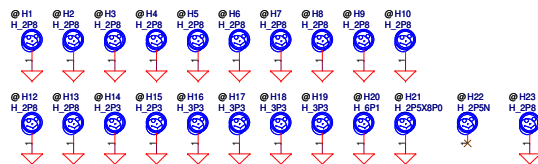
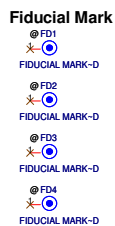
Rev	
1.0	

Date: Wednesday, February 22, 2012 Sheet 42 of 59

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LED Circuit Control Table		
	SYS_LED_MASK#	LID_CL#
Mask All LEDs (Sniffer Function)	0	X
Mask Base MB LEDs (Lid Closed)	1	0
Do not Mask LEDs (Lid Opened)	1	1

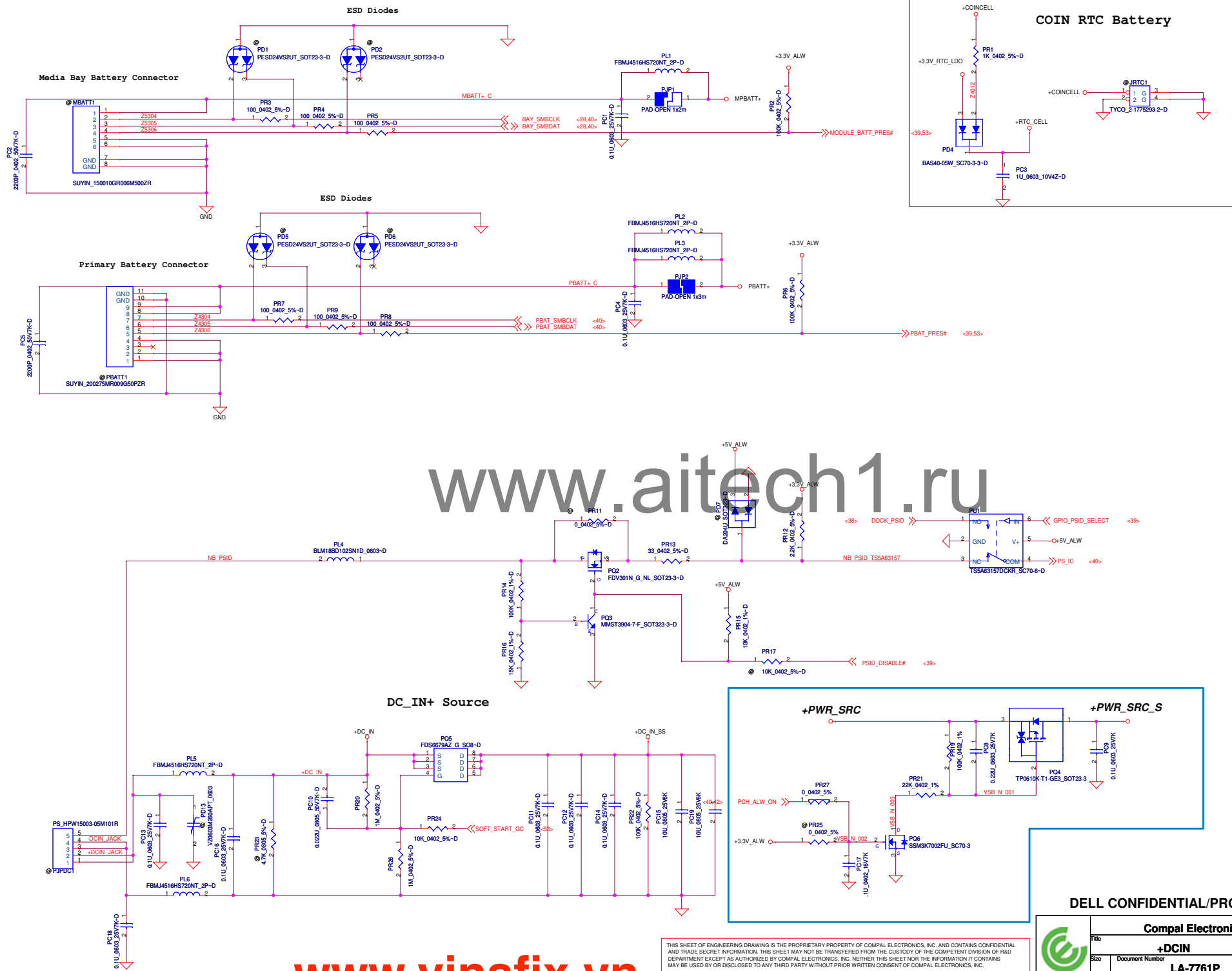


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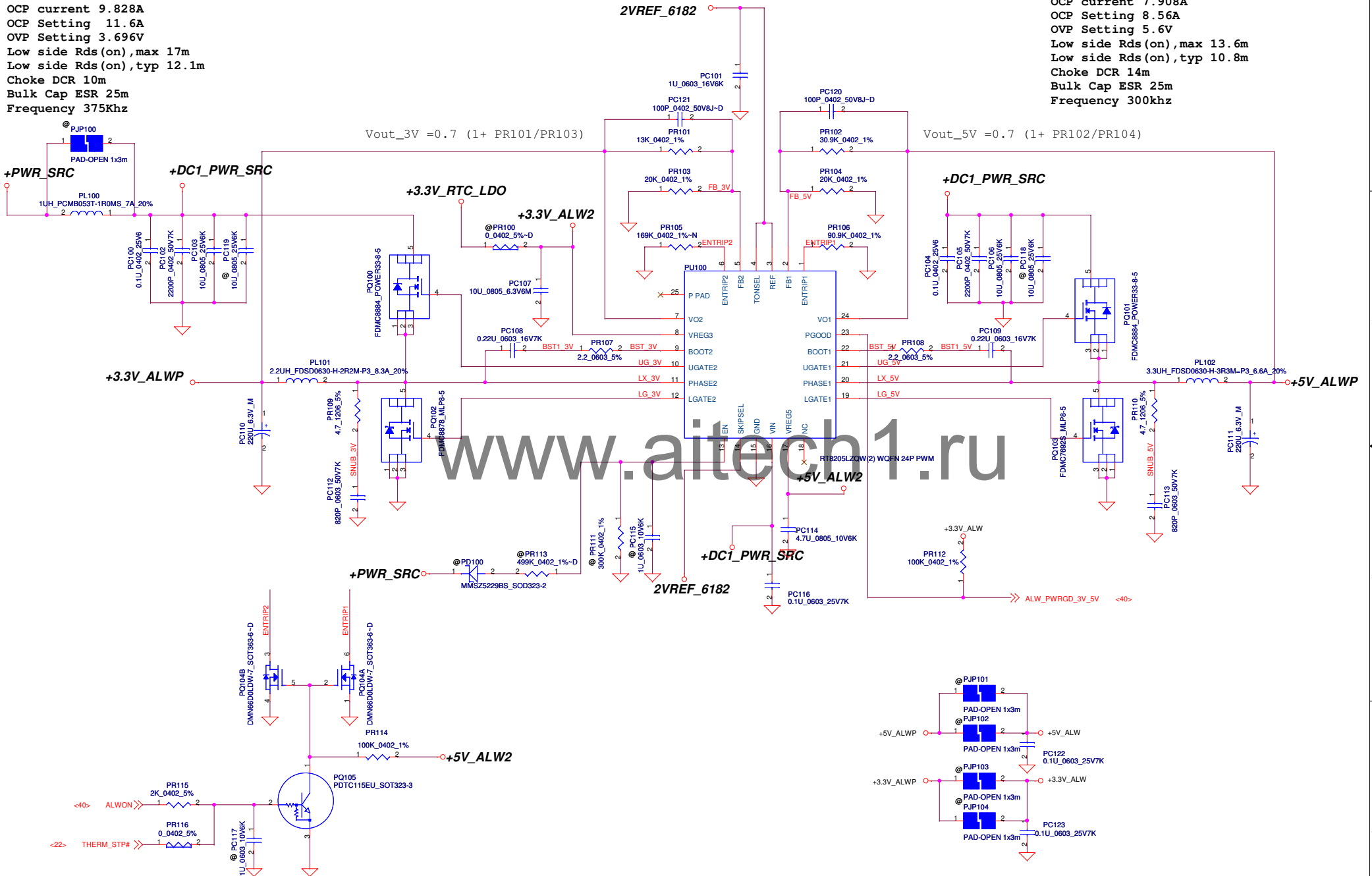
Compal Electronics, Inc.		
PWR SW/LED/PAD/ME		
Title	Document Number	Rev
Size	LA-7761P	1.0
Date:	Wednesday, February 22, 2012	Sheet 43 of 59



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3.3V +/- 5%
TDC 5.73A
Peak Current 8.19A
OCP current 9.828A
OCP Setting 11.6A
OVP Setting 3.696V
Low side Rds(on), max 17m
Low side Rds(on), typ 12.1m
Choke DCR 10m
Bulk Cap ESR 25m
Frequency 375Khz

5V +/- 5%
TDC 4.61A
Peak Current 6.59A
OCP current 7.908A
OCP Setting 8.56A
OVP Setting 5.6V
Low side Rds(on), max 13.6m
Low side Rds(on), typ 10.8m
Choke DCR 14m
Bulk Cap ESR 25m
Frequency 300khz



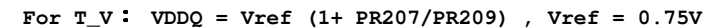
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Compal Electronics, Inc.			
Title		+5V_ALW/3.3V_ALW	
Size	Document Number	LA-7761P	
Date: Wednesday, February 22, 2012		Sheet	45 of 80

OVP Setting 1.725V
Low side Rds(on),max 5.1m
Low side Rds(on),typ 4.2m
Choke DCR 5m
Bulk Cap ESR 10m

0.75V +/- 5%
TDC 0.525A
Peak Current 0.75A
OCP Current 0.9A
OVP Setting 0.8625V



+1.5V MEN/+0.75V DDR VTT

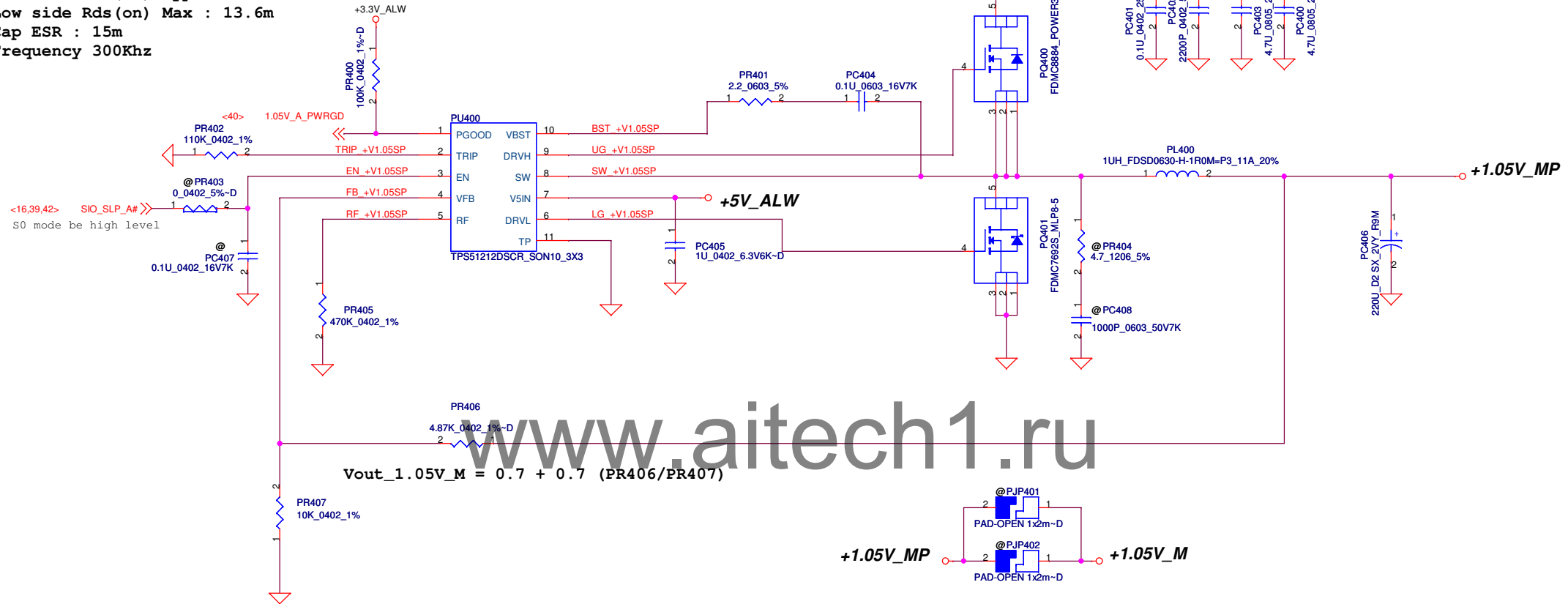
Date: Wednesday, February 22, 2012 Sheet 46 of 60

Date: Wednesday, February 22, 2012 Sheet 46 of 60

Date: Wednesday, February 22, 2012 Sheet 46 of 60

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+1.05V +/- 5%
 TDC 4.751A
 Peak Current 6.69A
 OCP setting 11.77A
 OVP Setting 1.3125V
 Low side Rds(on) Typ : 10.8m
 Low side Rds(on) Max : 13.6m
 Cap ESR : 15m
 Frequency 300Khz

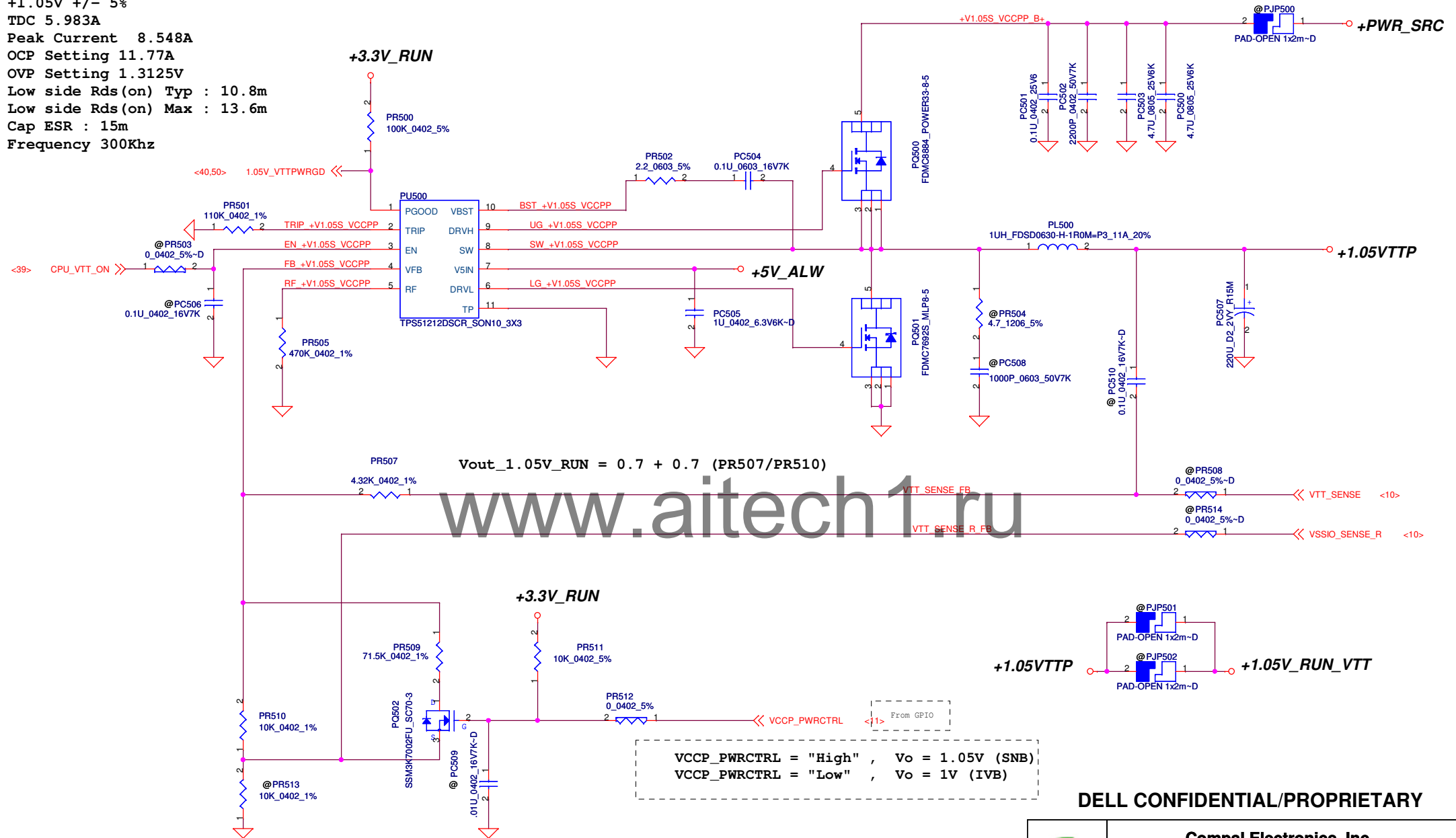


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Compal Electronics, Inc.			
Title			
+1.05V_M			
Size	Document Number		Rev
	LA-7761P		0.5
Date:	Wednesday, February 22, 2012		Sheet 48 of 60

+1.05V +/- 5%
 TDC 5.983A
 Peak Current 8.548A
 OCP Setting 11.77A
 OVP Setting 1.3125V
 Low side Rds(on) Typ : 10.8m
 Low side Rds(on) Max : 13.6m
 Cap ESR : 15m
 Frequency 300Khz



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Compal Electronics, Inc.		
Title		
+1.05V_RUN_VTT		
Size	Document Number	Rev
	LA-7761P	0.5
Date:	Wednesday, February 22, 2012	Sheet 49 of 60

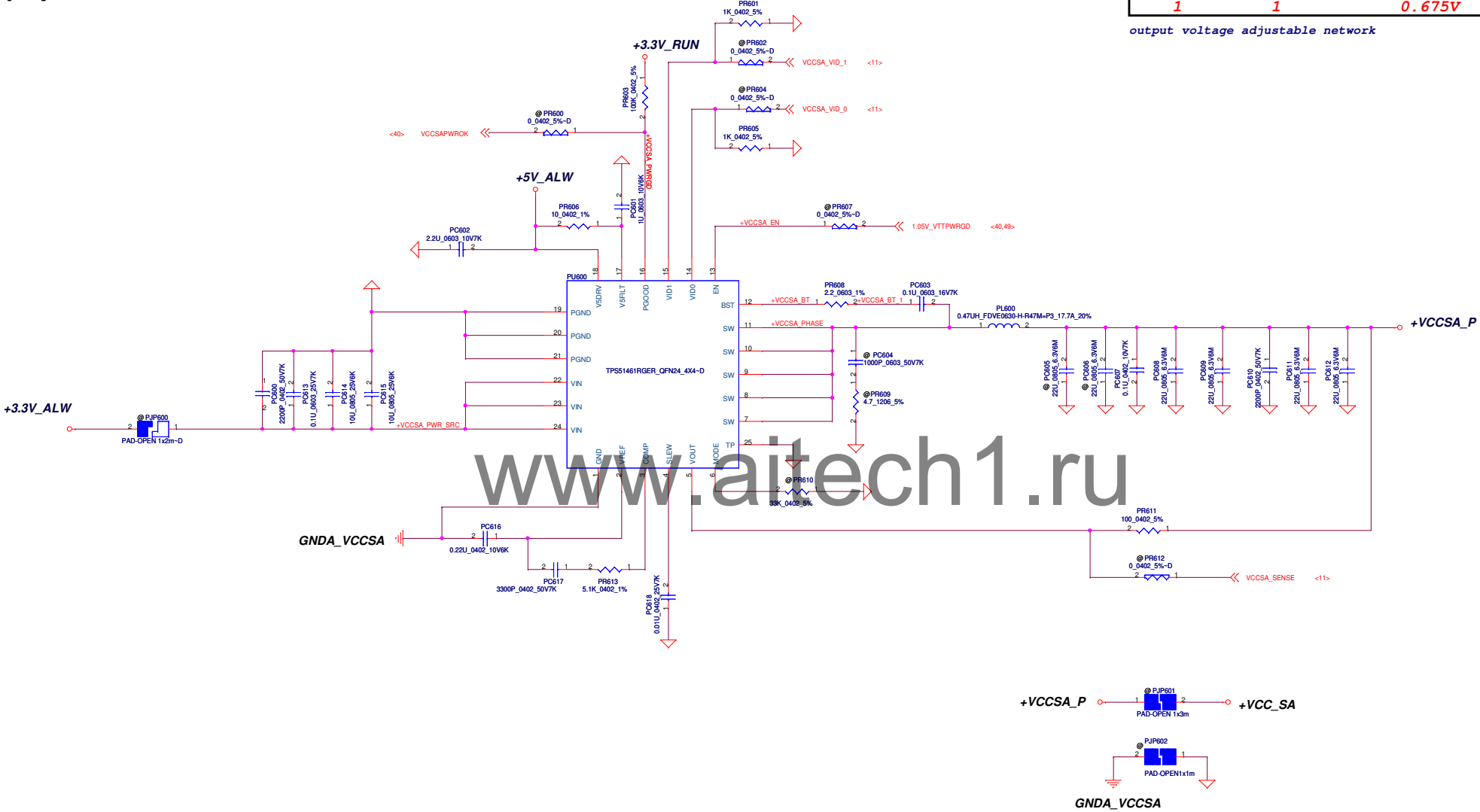
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VCCSA + / - 5%
TDC 4.2A
Peak Current 6A
OCP current 7.2A
OCP Setting 6.75A
OVP Setting VCCSA*120%
Frequency 1Mhz


The 1k PD on the VCCSA VIDs are empty.
These should be stuffed to ensure that
VCCSA VID is 00 prior to VCCIO stability.

VID [0]	VID[1]	VCCSA Vout
0	0	0.9V
0	1	0.8V
1	0	0.725V
1	1	0.675V

output voltage adjustable network



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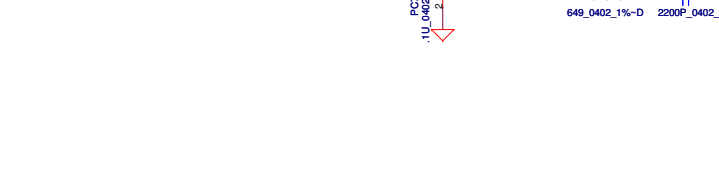
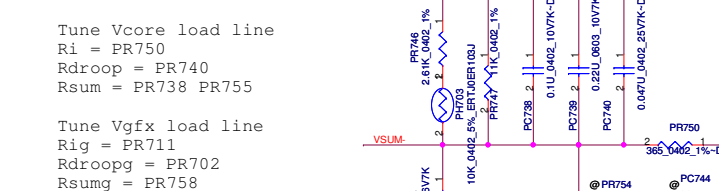
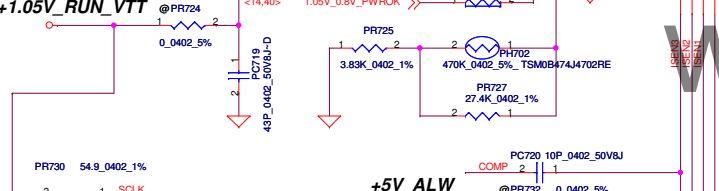
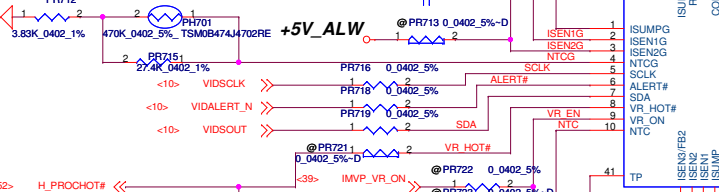
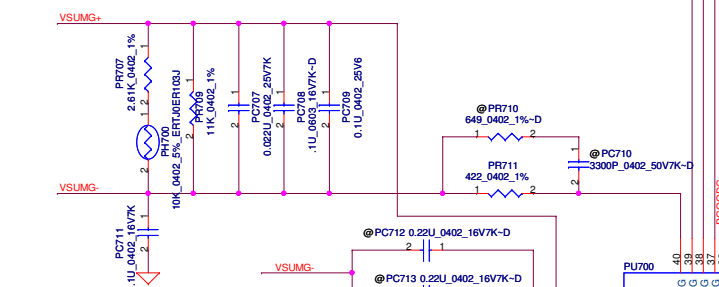


Compal Electronics, Inc.	
+VCC SA	
Size	Document Number
	LA-7761P
Date:	Wednesday, February 22, 2012
Sheet	50 of 60

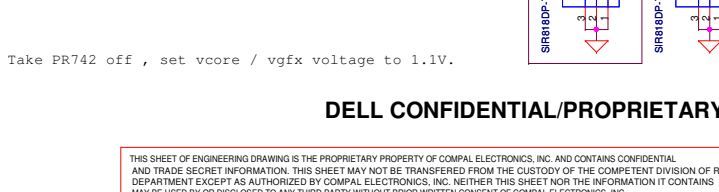
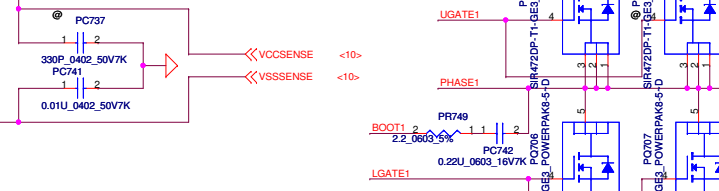
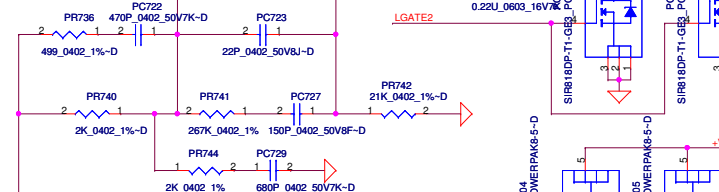
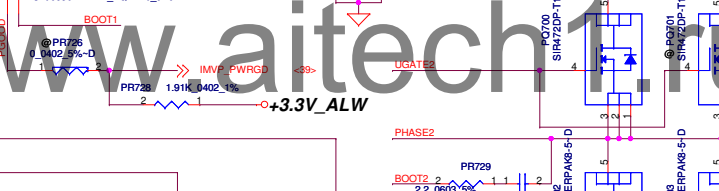
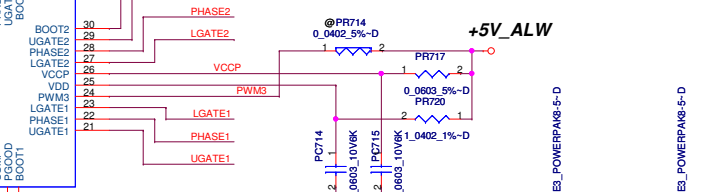
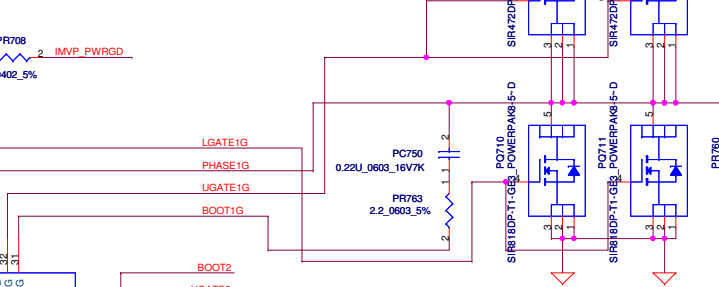
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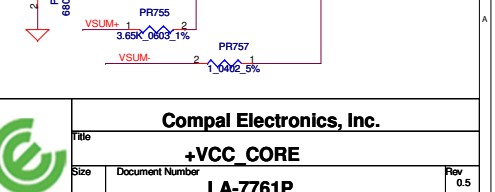
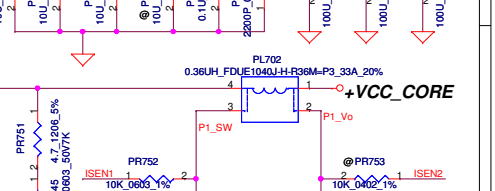
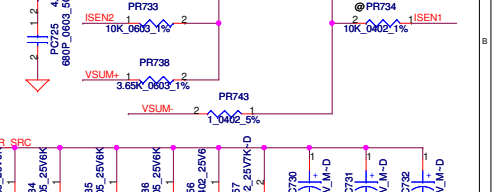
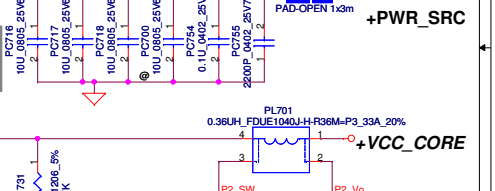
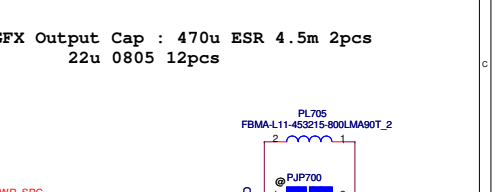
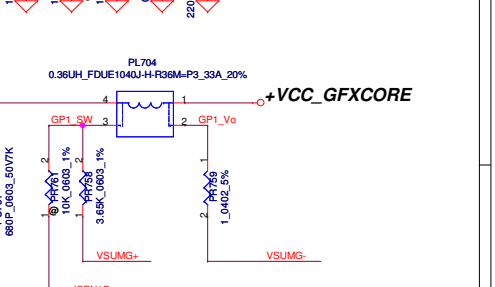
VCC_core
TDC 36A
Peak Current 53A
OCP current 63.5A
Load line 1.9
Low side Mosfet Rds(on), max 3.3m
Low side Mosfet Rds(on), typ 2.7m
Choke 0.36u +/-20%
Choke DCR 0.82m +/-5%



Vcore Output Cap : 470u ESR 4.5m 4pcs
10u 0805 10pcs / 22u 0805 16pcs



VGFX_CORE
TDC 21.5A
Peak Current 33A
OCP current 40A
Load line 3.9



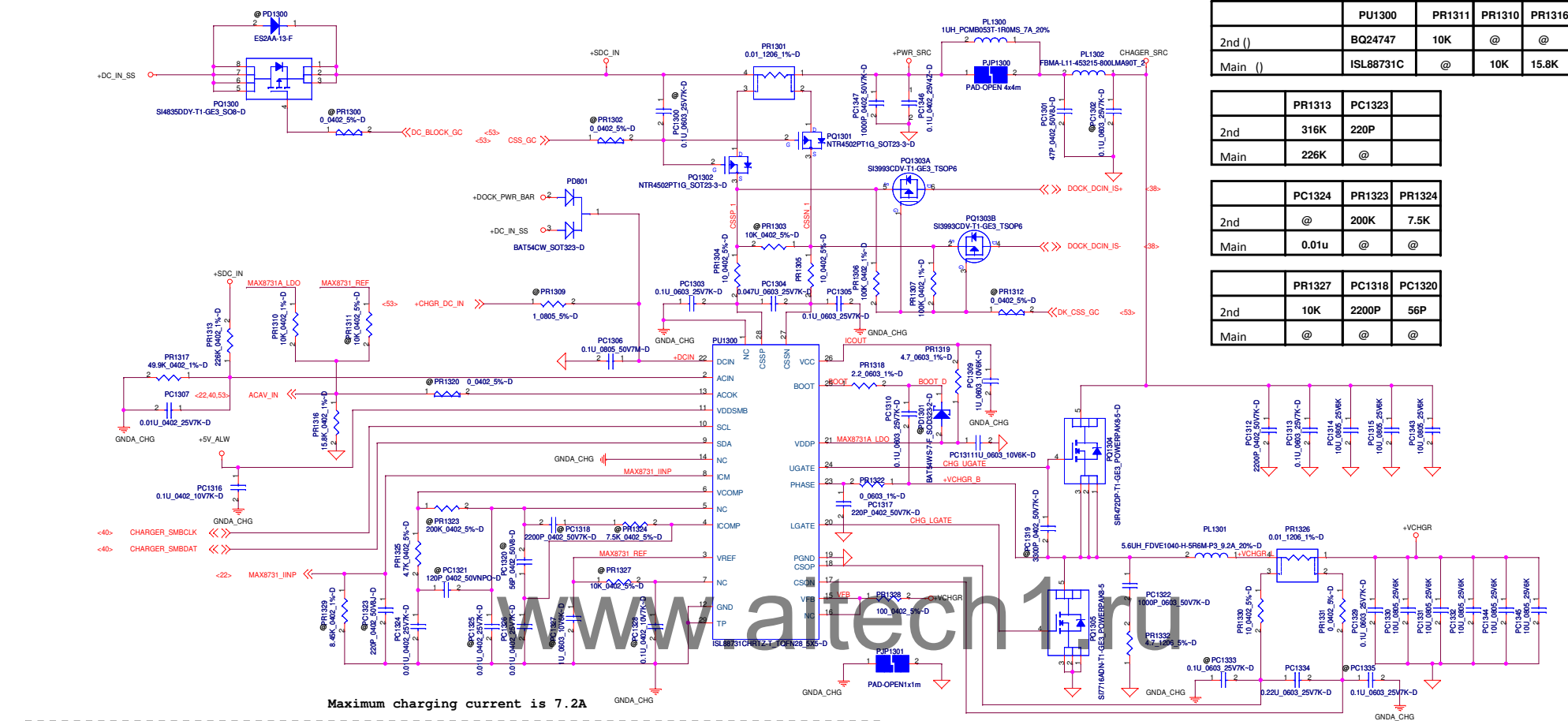
Take PR742 off , set vcore / vgfx voltage to 1.1V.

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+VCC_CORE			
File	Document Number	Rev	
	LA-7761P	0.5	
Date	Wednesday, February 22, 2012	Sheet	51 of 80



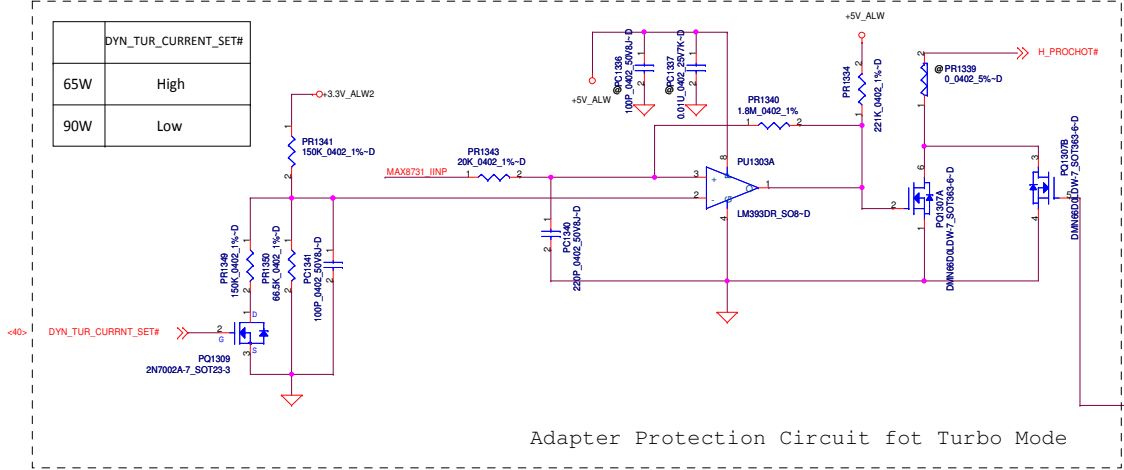
	PU1300	PR1311	PR1310	PR1316
2nd ()	BQ24747	10K	@	@
Main ()	ISL88731C	@	10K	15.8K

	PR1313	PC1323	
2nd	316K	220P	
Main	226K	@	

	PC1324	PR1323	PR1324
2nd	@	200K	7.5K
Main	0.01u	@	@

	PR1327	PC1318	PC1320
2nd	10K	2200P	56P
Main	@	@	@

DYN_TUR_CURRENT_SET#	
65W	High
90W	Low



	PC1321	PC1327	PC1326
2nd	120P	1u	@
Main	@	@	0.01u

	PC1333	PC1334	PR1330
2nd	0.1u	0.1u	0 ohm
Main	@	0.22u	10 ohm

	PR1322	PR1319	PC1309	PC1305	PR1304	PR1305	PC1304
2nd	1 ohm	@	@	@	0 ohm	0 ohm	0.1u
Main	0 ohm	4.7 ohm	1u	0.1u	10 ohm	10 ohm	0.047u

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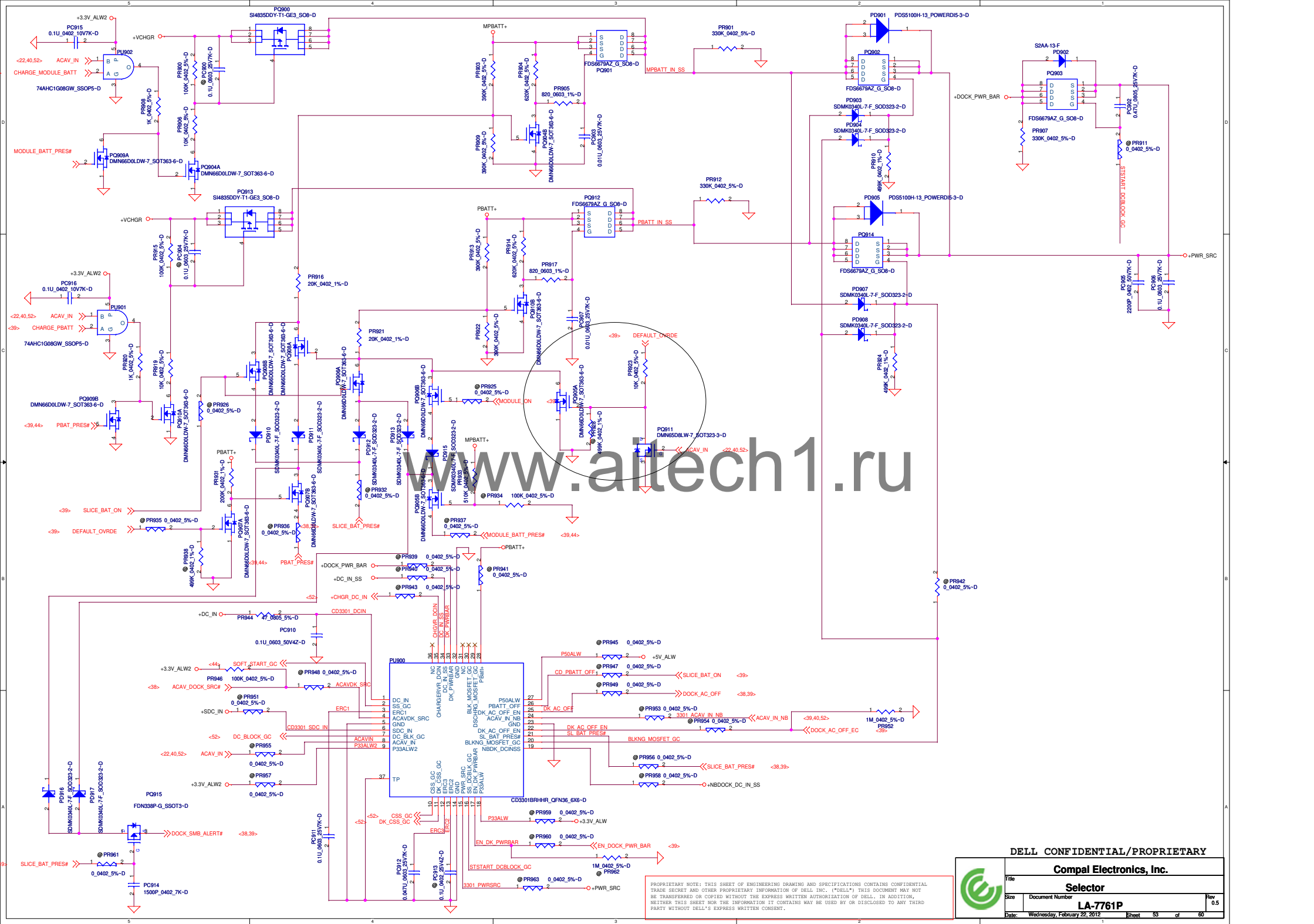
Charger

LA-7761P

Rev 0.5

Date: Wednesday, February 22, 2012 Sheet 52 of 60

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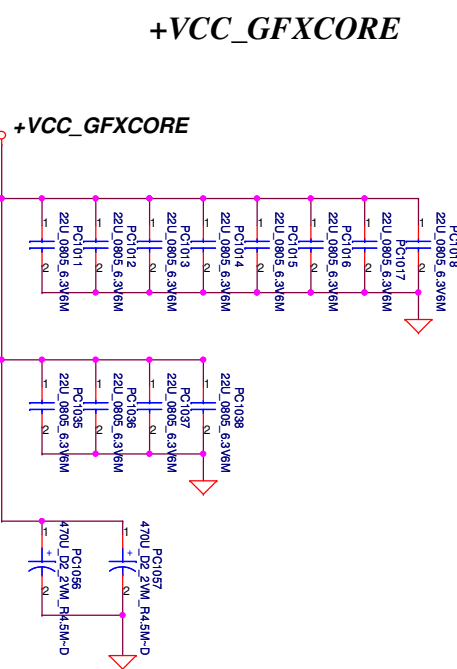
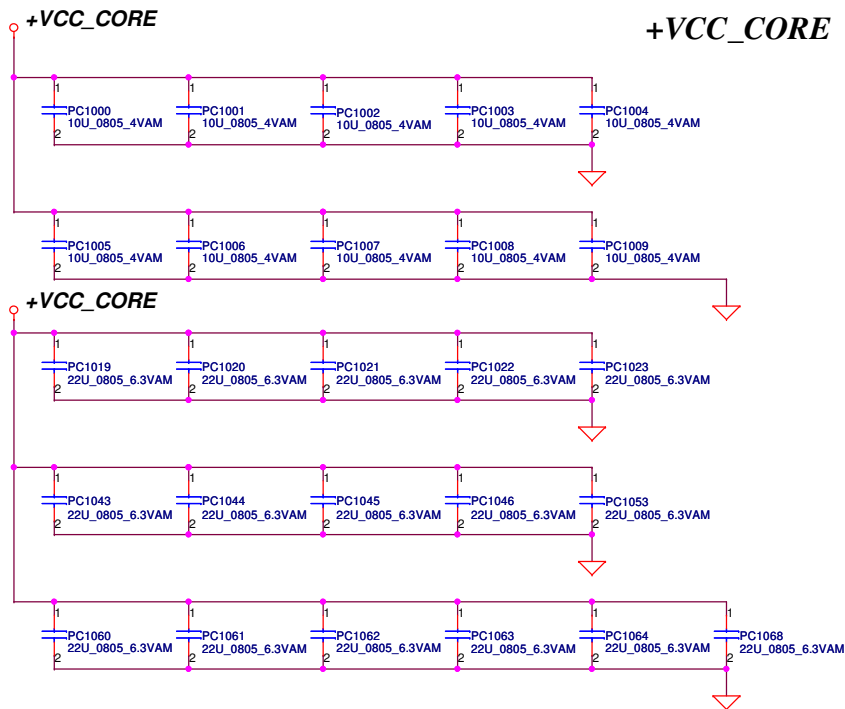
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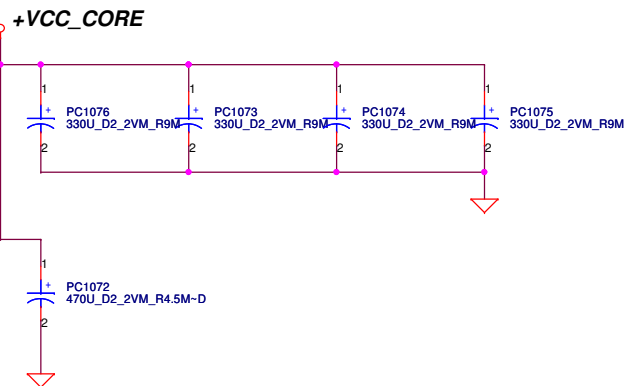
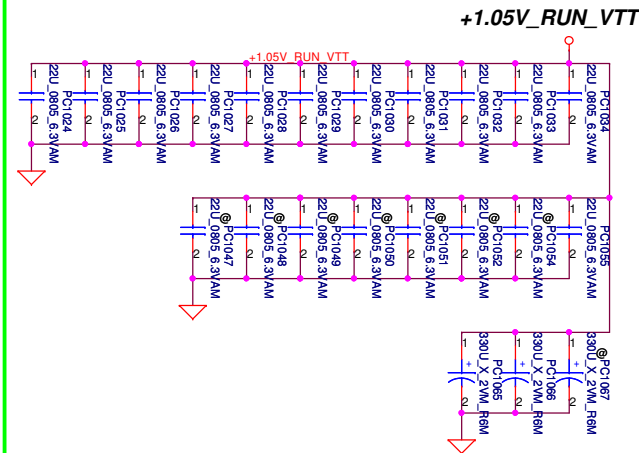


Title		Rev
Selector		0.5
Size	Document Number	
	LA-7761P	
Date:	Wednesday, February 22, 2012	Sheet 53 of 60



Below is 458544_CRV_PDDG_0.5 Table 5-8.

Socket Bottom	5 x 22 μ F (0805) 5 x (0805) no-stuff sites
Socket Top	7 x 22 μ F (0805) 2 x (0805) no-stuff sites



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PROCESSOR DECOUPLING

LA-7761P

Wednesday, February 22, 2012

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Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	36	HW	6/21/2011	COMPAL	USB3.0 & E-SATA behavio error.	U48 pin 10 & pin6 swap, and pin4 & pin5 swap.	X01
2	14	HW	6/21/2011	COMPAL	SPI debug connector interfere power CAP(PC208) change connector type.	Change JSPI1 connector to SP01001DQ00.	X01
3	41	HW	6/21/2011	COMPAL	Modify Touch Pad circuit	De-pop R1162.	X01
4	11	HW	6/21/2011	INTEL	Follow INTEL check list Rev1.5.	RC99 ,RC100 change to 100 Ω.	X01
5	31	HW	6/21/2011	INTEL	Follow INTEL ORB board.	Add CC178,CC179,CC149,CC150 0.1uf 0402 caps from +1.5V_CPU_VDDQ to 1.5V_MEM power rail.	X01
6	29	HW	6/21/2011	IDT	IDT request.	PJP62 change to "JUMP_43X118".	X01
7	34	HW	6/21/2011	COMPAL	Modify WWAN circuit.	JMINI1 pin1 contact to PCIE_WAKE#.	X01
8	42	HW	6/27/2011	COMPAL	Follow E4 VC +3.3V_SUS Source circuit .	Reserve SIO_SLP_S4# contact to Q53 pin2.	X01
9	29	HW	7/18/2011	COMPAL	Leverage 14" schematic to modify Codec circuit.	Remove R167 & R178 (0 Ω) .	X01
10	18	HW	7/18/2011	COMPAL	Leverage 14" schematic to modify PCH_GPIO16 pull-up resistor.	Change RH272 from 100KΩ to 10KΩ.	X01
11	17	HW	7/18/2011	COMPAL	Leverage 14" schematic to modify CAM_MIC_CBL_DET# pull-up resistor.	Change RH331 from 8.2KΩ to 10KΩ.	X01
12	42	HW	7/28/2011	COMPAL	Load SW sources output rising time mismatch and COS.cost concern.	Change back to E3 +3.3V/5V_RUN discrete solution	X01
13	15	HW	7/28/2011	COMPAL	bass on vender measure crystal EA by pass.	CH18,CH19 change to 10pF.	X01
14	34	HW	7/28/2011	COMPAL	Follow INTEL check list (Rev1.5) change PCH GPIO52(PCIE_MCARD2_DET#) pull up resistor to 10KΩ.	Change R695 from 100K to 10Kohms.	X01
15	32	HW	7/28/2011	COMPAL	INTEL power sequence fail on T13(+1.8V_RUN to H_CPUPWRGD assert) due to USH move to sub-board but "USH_PWR_STATE#" no PU/PD for default.	Add R1640, 1M ohms pull down for USH_PWR_STATE# at M/B side	X01
16	11	HW	7/28/2011	COMPAL	Follow INTEL check list Rev1.5 for "VCCIO_SEL" , series resistor no stuff .	De-pop RC140	X01
17	11	HW	7/28/2011	COMPAL	CH94 and CH95 to D2 size for cost concern	Change CH94 and CH95 from SGA0000170L to SGA00004L0L	X01
18	22	HW	7/28/2011	COMPAL	Thermal solution change to EMC4021 for cost concern.	Change thermal sensor to EMC4021 for UMA	X01
19	29	HW	7/28/2011	COMPAL	Codec is change to 92HD93.	Pop R162~R166 and de-pop U73	X01
20	40	HW	7/28/2011	COMPAL	Change board ID to X01	Change R875 to 130Kohms	X01
21	20,43	HW	7/28/2011	COMPAL	Turn on +5V_ALW_PCH MOSFET Vgs less than cut-in voltage in battery mode.	Add control circuit for +5V_ALW_PCH	X01
22	14,40	HW	7/28/2011	COMPAL	SMSC no support function for LPC_LDRQ0#.	Delete net, LPC_LDRQ0#. Leave LDRQ0# no connection on both of 5048 and PCH side	X01

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DELL CONFIDENTIAL/PROPRIETARY		
Compal Electronics, Inc.		
Title EE P.I.R (1/3)		
Size	Document Number	Rev 1.0
LA-7761P		
Date: Wednesday, February 22, 2012	Sheet 55	of 59

Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
23	29	HW	7/28/2011	IDT	CODEC is change to 92HD93.	Pop R162~R166 and de-pop U73	X01
24	29	HW	7/28/2011	IDT	Co-lay 92HD93 circuit for I2S BUS control.	Reserve 0 Ω to connect Codec(92HD93) Pin48 for EN_I2S_NB_CODEC#.	X01
25	42	HW	8/3/2011	COMPAL	Modify +1.5V_RUN load switch circuit for POWER team suggestion.	Change Q59 from NTGS4141NT1G to AO4728L.	X01
26	43	HW	8/3/2011	COMPAL	Follow INTEL Power down sequence Tc timing fail(BITS:DF493966).	Add AND Gate(TC7SH08FU) input connect PM_APWROK & SIO_SLP_A# , and output connector PM_APWROK_R.	X01
27	23	HW	8/4/2011	TI	CRT SW for TI 2nd source.	U18.29 connect to +3.3V_RUN.	X01
28	41	HW	8/4/2011	COMPAL	Reset IC threshold voltage issue	Change U4 to RT9801A (threshold adjustable)	X01
29	17	HW	8/4/2011	COMPAL	Intel Review Feedback for PCH_GPIO3.	POP RH332.	X01
30	30	HW	8/4/2011	COMPAL	Co-lay 92HD93 with ALC290	Modify codec schematics	X01
31	25	HW	8/8/2011	COMPAL	Add HDMI repeater.	Modify HDMI circuit.	X01
32	17	HW	8/11/2011	COMPAL	RF request.	1.CLK_PCI_MEC add By pass 10p after 22ohm(RH102) 2.CLK_PCI_LOOPBACK add By pass 10p after 22ohm(RH105)	X01
33	43	HW	8/11/2011	COMPAL	White light LED brightness is abnormal	change the resistor value: R934 change to 1K,R938 & R955 change to 1.8K,R939 change to 1.4K,R949 & R958 change to 620 and R957 change to 220.	X01
34	11	HW	8/12/2011	COMPAL	S3 resume issue.	Pop RC79 and de-pop RC82	X01
35	36	HW	8/29/2011	COMPAL	USB3.0 Tx AC coupling follow CRBboard.	change C412 & C413 to 0.1uF.	X01
36	19	HW	8/29/2011	COMPAL	CRT ripple garbage display issue.	change LH1 to 1uH inductor.	X01
37	43	HW	8/29/2011	COMPAL	White light LED brightness is abnormal	change the resistor value from 2.2K to 1.2K for R949, R958, R957, R955, R939, R938, R934	X01
38	29	HW	9/28/2011	COMPAL	Audio no sound issue in Dalmore 15 UMA. (BITS:DF504001).	Add C-R snubber circuit,C973~C976 (2200P) ,R1658~R1661 (3.3 Ω)	X02
39	40	HW	9/28/2011	COMPAL	EC has internal pull up for volume signals.	De-pop R1169, R1197, R1118.	X02
40	42	HW	9/28/2011	COMPAL	+3.3V_RUN boot leakage issue.	Pop Q69 & R929.	X02
41	39	HW	9/29/2011	COMPAL	SMSC change ECE5048 Pin A23 to GPIO0.	Link ECE5048 symbol.	X02
42	25	HW	10/12/2011	COMPAL	Remove HDMI level shifter and change to HDMI EMI low cost solution.	Modify HDMI circuit,De-pop L19~L22. Add L100~107 (9nH) and C1209~C1216 (3.3pF).	X02
43	19	HW	10/12/2011	COMPAL	CRT ripple garbage display issue	Change CH36 from 10uF(0603) to 22uF(0805).	X02
44	33	HW	10/12/2011	COMPAL	EMI request to change SD CLK series R	R676 is changed from 33ohms to 10ohms	X02

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Compal Electronics, Inc.			
EE P.I.R (2/3)			
Size	Document Number		Rev
	LA-7761P		1.0
Date:	Wednesday, February 22, 2012		
Sheet	56 of 59		

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Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
46	43	HW	10/12/2011	COMPAL	DFX request to change CILP PAD.	Change CLP1 PAD from "79X138" to "110X138" .	X02
47	ALL	HW	10/12/2011	COMPAL	For cost saving	Change 0 ohm resistor to short pad.	X02
48	41	HW	10/12/2011	COMPAL	SMSC review feedback.	Reserve R1656 and R1657 100Kohms to GND for I2S disabled.	X02
49	29	HW	10/12/2011	COMPAL	Remove ALC290 co-lay circuit	Remove R1646, C1164, R1644, R1643, R1642, R171, C1204, C1205, R1647, C1165, R1648 and R1645.	X02
50	39	HW	10/13/2011	COMPAL	When suspend/resume cycles, wireless SW GPIO IRQs keeps giving	Add R771 pulling up to +3.3V_ALW for WIRELESS_ON#/OFF and de-pop R766.	X02
51	41	HW	10/13/2011	COMPAL	Change reset IC to RT9818A-44GU3	Update U4 symbol and add R1629 for backup of inrush prevention. Change RSMRST# pull up with 100Koms. Pop R1655 and de-pop R1623.	X02
52	17	HW	10/19/2011	COMPAL	UMA PCI clock noise issue. [BITS:DF511181]	Pop CH20 & CH21 to 8.2pF.	X02
53	7	HW	10/21/2011	COMPAL	ESD Request.	Reserve 100p cap on PCH_PLTRST#_R , H_THERMTRIP#_R , XDP_DBRESET#_R, VIDSCLK and VIDSOUT .	X02
54	7	HW	10/21/2011	COMPAL	ESD Request.	Reserve 8.2p cap on CLK_PCI_5048.	X02
55	22	HW	10/25/2011	COMPAL	VSET Setting change Tp from 88 degree to 93 degree.	change R406 from 953Ω to 1.33KΩ	X02
56	38	HW	10/27/2011	COMPAL	EMI request to add 33Ω for DP port.	Add 33ohm on DPD_DOCK_LANE_P0/N0,DPD_DOCK_LANE_P1/N1,DPD_DOCK_LANE_P2/N2, DPD_DOCK_LANE_P3/N3,DPC_DOCK_LANE_P0/N0, PC_DOCK_LANE_P1/N1, DPC_DOCK_LANE_P2/N2, PC_DOCK_LANE_P3/N3.	X02
57	7	HW	10/27/2011	COMPAL	ESD Request.	RC19.2 change to XDP_DBRESET#_R. RC29.2 change to XDP_TDI_R. RC35.2 change to XDP_TDO_R.	X02
58	34	HW	11/08/2011	COMPAL	PCH GPIO52 changed to be free.	De-pop R725, remove R695 and add RH359.	X02
59	ALL	HW	11/08/2011	COMPAL	For cost saving	Change 1Kohms +-1% to +-5% except RC78, RC80, RC81 and RC84.	X02
60	11, 43	HW	11/14/2011	COMPAL	AO4728L leakage issue	Change QC3 and Q59 to AO4304L (SB00000RV00) .	X02
61	32	HW	11/14/2011	COMPAL	+3.3V_RUN Giltch when AC plugin	Add D87, R1666 and R1665 for HW solution backup.	X02
62	11, 24, 29.	HW	11/16/2011	COMPAL	Change RC value at Gate of MOS Load SW to modify power rail soft start timing	RC72 from 100K to 330K; RC143 form 330K to 1M; CC136 form 0.1u to 0.022u R412 from 100K to 470K; R1632 form 1M to 4.7M; C293 form 0.1u to 0.022u R507 from 100K to 470K; R517 form 1M to 4.7M; C400 form 0.1u to 0.022u R722 from 100K to 470K; R1625 form 1M to 4.7M; C644 form 4700p to 220p R729 from 100K to 470K; R1628 form 1M to 4.7M; C650 form 4700p to 220p R917 from 100K to 470K; R1617 form 1M to 4.7M; C770 form 4700p to 220p R920 from 100K to 470K; R1610 form 470K to 2.2M; C771 form 4700p to 470p R930 from 330K to 470K; R1611 form 470K to 1M; C773 form 2200p to 100p R906 from 100K to 470K; C763 form 2200p to 220p R912 from 100K to 470K; C766 form 470p to 220p	X02
63	40	HW	11/16/2011	COMPAL	Change PCH to C1 version.	Change UH4 to SA00005BU1L.	X02
64	14~21	HW	11/16/2011	COMPAL	Change board ID to X02.	Change R875 to 62Kohms.	X02


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				Compal Electronics, Inc.	
				EE P.I.R (3/3)	
Size	Document Number			Rev	
	LA-7761P			1.0	
Date:	Wednesday, February 22, 2012			Sheet	57 of 59

Version Change List (P. I. R. List)


Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
65	17, 34, 38.	HW	12/05/2011	COMPAL	EMI request for USBP6 & USBP8. [BITS:DF524330]	Swap USB Port6 and Port8 and reserve a choke at E-Docking conn. side: Port6 from Mini3 Pink Panther card to E-docking Port8 from E-Docking to Mini3 Pink Panther card	X02
66	35	HW	12/05/2011	COMPAL	EMI request to add 0.1u CAP for Express Card.	Add 0.1u CAP on EXPRCD_CPPE#, CARD_RESET#, CPUSB# traces.	X02
67	24	HW	12/06/2011	COMPAL	EMI request for USBP12. [BITS:DF524330]	Pop L10 and De-pop R427, R428.	X02
68	25	HW	12/06/2011	COMPAL	EMI final solution for HDMI.	C1209~C1216 CAP 3.3P Change to 1.8PF, OB 680 change to 604ohm.	X02
69	40	HW	02/01/2012	COMPAL	Change board ID to A00.	Change R875 to 33Kohms.	A00
70	17	HW	02/01/2012	COMPAL	33MHz PCI noise.	Modify CLK_PCI_MEC and CLK_PCI_Loopback damping(RH102 and RH105) from 22ohm to 33ohm.	A00
71	42	HW	02/20/2012	COMPAL	ME Request.	SW1 change to SN11100580L.	A00
72	All	HW	02/20/2012	COMPAL	For cost saving.	Change 0 ohm resistor to short pad, total 15 pcs.	A00
73	27	HW	02/20/2012	COMPAL	For cost saving.	HDD PWR De-pop :R1624, R500, R499, R504, R516, Q28, C393, C394.	A00
74	14	HW	02/20/2012	COMPAL	For cost saving.	De-pop RH288, RH48, RH49, RH47.	A00
75	7	HW	02/20/2012	COMPAL	ESD Request.	De-pop RC30, RC31, RC33, RC34, RC36, RC37, RC38, RC39 .	A00
76	36	HW	02/20/2012	COMPAL	System will reconnect USB 3.0 after resume from S3 issue. [BITS:DF537410].	JBTB1 Pin 38 reserve R154 to +3.3V_ALW.	A00
77	34	HW	02/20/2012	COMPAL	E4 no support WWAN SMBUS function .	Not stuff R1157 and R1158.	A00
78	35	HW	02/21/2012	COMPAL	Fix EMI issue.	Stuff CE16, CE17 & CE18.	A00
79	36	HW	02/21/2012	COMPAL	Dell E4 NB USB1457 Samsung i9100 S0 issue.	Add Q126 and remove R1613.	A00

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Compal Electronics, Inc.			
Title EE P.I.R (4/4)			
Size	Document Number LA-7761P		Rev 1.0
Date:	Wednesday, February 22, 2012		Sheet 58 of 59

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	46	+1.5V_SUS /+0.75V_DDR_VT	6/25	Compal	Follow VC	Add Net SIO_SLP_S4#	X01
2	53	Selector	7/15	Compal	Module bay can not discharge	Delete connection between PR921 pin2 and PR916 pin1	X01
3	45	+5V/+3.3V	7/21	Compal	DFX concern	Change PL101 to SH00000M700 (S COIL 2.2UH 20% FDS0630-H-2R2M=P3 8.3A) from SH00000FN0L (S COIL 3.3U 20% FDVE1040-H-3R3M=P3 11.3A) Change PL102 to SH00000OT00 (S COIL 3.3UH 20% FDS0630-H-3R3M=P3 6.6A) from SH00000FN0L (S COIL 3.3U 20% FDVE1040-H-3R3M=P3 11.3A)	X01
4	45	+5V/+3.3V	7/21	Compal	COS concern	Change PC110 to SF000002Y00 (S_A-P_CAP 220U 6.3V M 6.3X4.2 R17M VLPS) from SGA00002M0L (S POLY C 220U 6.3V M V LESR25M PSL H1.9)	X01
5	45	+5V/+3.3V	7/26	Compal	Jitter unstable	Reserve PC120 PC121 0402 pad for improve jitter issue	X01
6	48	+1.05V_M	7/26	Compal	Jitter unstable	Reserve PC214 0402 pad for improve jitter issue	X01
7	51	VCORE_ISL95836	7/26	Compal	Fine tune Vgfx OCP and load line	Change PR711 to SD00000G780 (S RES 1/16W 422 +-1% 0402) from SD034357080 (S RES 1/16W 357 +-1% 0402) Change PR702 to SD034287180 (S RES 1/16W 2.87K +-1% 0402) from SD034255180 (S RES 1/16W 2.55K +-1% 0402) Change PR702 to SE071680J8L (S CER CAP 68P 50V J NPO 0402) from SE071330J8L (S CER CAP 33P 50V +-5% NPO 0402)	X01
8	51	VCORE_ISL95836	7/28	Compal	EMI solution	Add PL705 SM01000DJ00 (S SUPPRE_ FBMA-L11-453215-121LMA90T 1812)	X01
9	44	+DCIN	8/3	Compal	ME design change	Change PJPDC1 DCIN Cable connector to 5 pin from 7 pin	X01
10	44	+DCIN	10/17	Compal	HW add solution for S5 mode	Add PR27 SD028000080 (S RES 1/16W 0 +-5% 0402)	X02
11	52	Charger	10/25	Compal	EMI solution for reduce charger noise	Add PC1346 SE102104K8L (S CER CAP .1U 10V +-10% X7R 0402) Add PC1347 SE074102K8L (S CER CAP 1000P 50V +-10% X7R 0402) Add PL1302 SM01000DJ00 (S SUPPRE_ FBMA-L11-453215-121LMA90T 1812) Pop PC1317 SE074221K8L (S CER CAP 220P 50V K X7R 0402)	X02
12	54	PWR_PROCESSOR DECOUPLING	12/6	Compal	Change Vcore output bulk cap from 3pin to 2pin to fine tune transient_LL	Change PC1076 PC1073 PC1074 PC1075 PC1072 to SGA0000420L (S POLY C 470U 2V M D2 LESR4.5M SX H1.9) from SGA00004X0L (S POLY C 470U 2V M D2 LESR4.5M LX H1.9)	X02
13	44	+DCIN	2/15	Compal	ESD reserve PD7 for protect NB_PSID	Add PD7 SC1A204U00L (S DIO DA204U (UMD3))	

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Compal Electronics, Inc.			
Title			
PWR_PIR 1			
Size	Document Number		Rev
	LA-7761P		1.0
Date:	Wednesday, February 22, 2012		
Sheet	59 of 59		

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